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(The Puttrich'sche Portrait of Kant was printed in the *Kant-Studien* in 1906 and is said by Professor Vaihinger to be one of the best likenesses of the Königsberg philosopher. The name of the artist was Puttrich, and the original painting is back before 1798. It is interesting to note that this portrait of Kant was used by sculptor, Rauch, as his model for the statue of Kant upon the memorial monument of Frederick the Great.)

A BEGINNER'S HISTORY OF PHILOSOPHY

BY

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VOL. II

MODERN PHILOSOPHY

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PREFACE

THE pedagogical purpose of this history of philosophy is stated in the Preface to the first volume. It may be desirable in this place to restate what that purpose is.

This book is intended as a text-book for sketch-courses in the history of philosophy. It is written for the student rather than for the teacher. It is a history of philosophy upon the background of geography and of literary and political history. Since the book is intended for the student, it makes the teacher all the more necessary; for it puts into the hands of the student an outline of the history of philosophy and into the hands of the teacher the class-room time for inspiring the student with his own interpretations. In making use of geographical maps, contemporary literature, and political history, this book is merely employing for pedagogical reasons the stock of information with which the student is furnished, when he begins the history of philosophy. The summaries, tables, and other generalizations are employed, as in text-books in other subjects, as helps to the memory. Therefore the book has the single purpose of arranging and organizing the material of the history of philosophy for the beginner.

The student will be impressed with the short time-length of the modern period compared with the tremendously long stretches of the periods of antiquity. The modern period is only four hundred and fifty years

in length, if we take the date 1453 as its beginning. Compared to the twenty-two hundred years of ancient and mediæval life, the period of modern life seems very short. Furthermore the student who has followed the philosophy of antiquity must have observed how often philosophy arose out of ethnic situations in which whole civilizations were involved. He will find that modern philosophy in this respect stands in contrast with the philosophy of ancient times. With the decentralizing of modern Europe, philosophy has also become decentralized. This does not mean that philosophical movements have included fewer people in their sweep, but that the movements have had shorter life, the transitions have been quicker, and the epochs have been briefer. Modern civilization is subjective; and its philosophy is thereby more technical, and more difficult to understand and to interpret than the philosophy of antiquity.

There are many helpful books in English on the history of modern philosophy, and the student should have them at hand. I call attention especially to Rand, *Modern Classical Philosophers*, for its judicious selection from the original sources; to Royce, *Spirit of Modern Philosophy*, chapters iii to x; to Eucken, *The Problem of Human Life*, pp. 303 to 518; and to the Summaries in Windelband, *History of Philosophy*, Parts IV to VII. Besides these there are valuable histories of modern philosophy by Falckenberg, Höffding (2 vols.), Weber, Ueberweg (vol. ii), Calkins, Dewing, and Rogers.

To friends who have read parts of the manuscript, I desire to acknowledge my indebtedness for many wise criticisms and suggestions; especially to Professor W. A. Neilson, Professor R. B. Perry, Dr. B. A. G. Fuller,

and Dr. J. H. Woods of Harvard University; to Professor Mary W. Calkins of Wellesley College; to Professor W. P. Montague of Columbia University; and to Professor S. P. Capen of Clark College.

TUFTS COLLEGE, December, 1910.

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A BEGINNER'S HISTORY OF PHILOSOPHY

VOLUME II

MODERN PHILOSOPHY (1453 TO THE PRESENT TIME)

CHAPTER I

THE CHARACTERISTICS AND DIVISIONS OF THE MODERN PERIOD

The Difficulty in the Study of Modern Philosophy. Beside the great spans of ancient and mediæval civilizations, the 450 years of the modern period seem brief. The road is indeed relatively short from mediæval times to the century in which we live, and yet it proves difficult to the student who travels it for the first time. Even for the modern mind the study of modern philosophy is inherently more difficult than that of the ancient and mediæval. The preceding periods present new points of view, but these, once attained, lead along comparatively easy ways. The chief difficulty of the preceding periods is overcome when their peculiar view of things is gained; but the student of modern philosophy is confronted with difficulties all along the way. In the first place, modern philosophy is very complex because it is a conflict of various aspirations. It has neither the objectivity of ancient thought nor the logical consistency of mediæval thought. It arises from

subjective motives, whose shadings are difficult to trace. The task is rendered harder by the fact that intimations of the problems in the history of modern philosophy are on the whole present in the beginner's mind; and yet at the same time his mind possesses, besides these, many mediæval notions as well. For the student to pass successfully through the entire length of modern thought from Cusanus to Spencer means, therefore, two things for him: (1) he must gain an insight into the depth and significance of his own half-formed ideas; (2) he must transcend or give up entirely his mediæval notions. If therefore philosophy represents the epoch that produces it, — either as the central principle or as the marginal and ulterior development of that epoch, — the modern can come to an understanding of the history of modern philosophy only by coming to an understanding of himself and his own inner reflections.

This will explain why the short period of modern thought is traditionally divided into comparatively many periods. These subordinate periods ring out the changes through which the modern man feels that he himself has blindly passed in his inner life. Modern philosophy is no more local and temporary than the ancient; it is no less a part of a social movement; but the modern man is more alive to the differentiations of modern thought than he is to those of antiquity.

The Periods of Modern Philosophy. The divisions of the history of modern philosophy are as follows: —

1. The Renaissance (1453–1690) — from the end of the Middle Ages to the publication of Locke's *Essay on the Human Understanding.*
2. The Enlightenment (1690–1781) — to the publication of Kant's *Critique of Pure Reason.*

3. German Philosophy (1781–1831) — to the death of Hegel.
4. The Nineteenth Century Philosophy (1820 — the present time.)

The Renaissance, the first period, covers more than half of the length of modern times. It is sometimes called the springtime of modern history, although it is longer than all the other seasons together. It is to be noted that two epoch-making books form the dividing lines between the first three periods. The transition from the Renaissance to the Enlightenment is signalized by Locke's great *Essay on the Human Understanding*, which expressed for one hundred years the political and philosophical opinions of western Europe. The transition from the Enlightenment to German Philosophy was in its turn signalized by the appearance of Kant's *Critique of Pure Reason*, and this book may be said to have been fundamental to human thinking ever since. There is one point further to be noticed in these divisions, and that is the overlapping of the last two periods. German philosophy ends practically with the death of Hegel in 1831, and the modern Evolution movement began at least ten years before, about 1820. No great philosophical treatise marks the division here, for the Evolution movement had its beginnings in German philosophy and in the discoveries and practical inventions of natural science. Evolution, however, became a reaction upon the last phases of German philosophy, and then formed a distinct movement. The book that formulated the Evolution movement most fully appeared several years after the theory was under way. This was Darwin's *Origin of Species*, published in 1859. Locke's *Essay* and Kant's *Critique* are therefore

the most influential philosophical interpretations of the history of modern times since its early beginnings in the Renaissance.

The Causes of the Decay of the Civilization of the Middle Ages. The social structure of the mediæval time weakened and broke apart, in the first place because of certain inherent defects in its organism; in the second place because of some remarkable discoveries, inventions, and historical changes. We may call these (1) *the internal causes* and (2) *the external causes* of the fall of the civilization of the Middle Ages.

(*a*) *The Internal Causes* were inherent weaknesses in mediæval intellectual life, and alone would have been sufficient to bring mediæval society to an end.

(1) *The intellectual methods* of the Middle Ages were self-destructive methods. We may take scholasticism as the best expression of the intellectual life of the Middle Ages, and scholasticism even in its ripest period used the *method of deductive logic.* Scholasticism did not employ induction from observation and experiment, but proceeded on the principle that the more universal logically a conception is, the more real it is. (See vol. i. p. 355.) On this principle scholasticism set as its only task to penetrate and clarify dogma. Its theism was a *logical* theism. Even Thomas Aquinas, the great classic schoolman, used formal logic (dialectics) as the method of obtaining the truth. After him in the latter part of the Middle Ages, logic instead of being a method became an end. It was studied for its own sake. This naturally degenerated into word-splitting and quibbling, into the commenting upon the texts of this master and that, into arid verbal discussions. The religious orders frittered away their time on verbal questions of trifling

importance. The lifetime of such intellectual employment is always a limited one.

(2) *The standard of the truth of things* in the Middle Ages became a double standard, and was therefore self-destructive. Ostensibly there was only one standard, — infallible dogma. Really there were two standards, — reason and dogma. The employment of logical methods implied the human reason as a valid standard. Logic is the method of human reasoning. To use logic to clarify dogma, to employ the philosophy of Aristotle to supplement the Bible, to defend faith by argument, amounted in effect to supporting revelation by reason. It was the same as defending the infallible and revealed by the fallible and secular. It was the erecting of a double standard. It called the infallible into question. It was the offering of excuses for what is supposedly beyond suspicion. The scholastic made faith the object of thought, and thereby encouraged the spirit of free inquiry.

(3) *The development of Mysticism* in the Middle Ages was a powerful factor that led to its dissolution. There is, of course, an element of mysticism in the doctrine of the church from St. Augustine onwards, and in the Early Period of the Middle Ages mysticism had no independence. But mysticism is essentially the direct communion with God on the part of the individual. The intermediary offices of the church are contradictory to the spirit of mysticism. It is not surprising, therefore, to find in the last period of scholasticism numerous independent mystics as representatives of the tendency of individualistic religion, which was to result in the Protestantism of the Renaissance.

(4) *The doctrine of Nominalism* was the fourth

important element to be mentioned that led to the dissolution of the civilization of the Middle Ages. This was easily suppressed by the church authorities in the early mediæval centuries, when it was a purely logical doctrine and had no empirical scientific basis. In the later years, however, nominalism gained great strength with the acquisition of knowledge of the nature world. Nominalism turned man's attention away from the affairs of the spirit. It incited him to modify the realism of dogma. It pointed out the importance of practical experience. It emphasized individual opinion, neglected tradition, and placed its hope in the possibilities of science rather than in the spiritual actualities of religion.

(*b*) *The External Causes* consisted of certain important events that brought the Middle Ages to a close and introduced the Renaissance. These events caused great social changes by demolishing the geographical and astronomical conceptions of mediæval time which had become a part of church tradition.

First to be mentioned are the inventions which belong to the Middle Ages, but which came into common use not before the beginning of the Renaissance. These played an important part in the total change of the society which followed. They were the magnetic needle, gunpowder, which was influential in destroying the feudal system, and printing, which would have failed in its effect had not at the same time the manufacture of paper been improved. Moreover at the end of the fifteenth and the beginning of the sixteenth century occurred the following events: —

1453. Constantinople fell and its Greek scholars migrated to Italy.

1492. Columbus discovered America, an achieve-

ment which was made possible by the use of the magnetic needle.

1498. Vasco da Gama discovered the all-sea route to India and thereby changed the course of the world's commerce.

1518. The Protestant Reformation was begun by Luther.

1530. Copernicus wrote his *De revolutionibus orbium*, in which he maintained that the earth moved around the sun.

CHAPTER II

THE RENAISSANCE* (1453–1690)

The General Character of the Renaissance. The causes that led to the decline of the society of the Middle Ages were of course the same that ushered in the period of the Renaissance, — the first, the longest, and the most hopeful period of modern times. The general characterization of this period may be expressed in a single phrase, *a New Man in a New Universe.* This, however, needs explanation.

(*a*) The *New Man* of the Renaissance was distinctly a man with a country. The fusion of the German and Roman peoples in the Dark Ages before Charlemagne (800) was now completed. The fusion did not result in a homogenous whole, but in groups which formed the nations of Europe. The time when this grouping was practically finished is a difficult problem, into which we will not inquire. In a real sense it never was nor will be ended. We know that the nations began to form about the year 1000, and when we examine the history of the Renaissance we find Italians, Germans, French, Dutch, and English with distinctive national characteristics. We find the Renaissance first centralized among the Italians and Germans, and then later among the English, the people of the Low Countries, and the French. The Italian is a new Roman and

* Read Eucken, *Problem of Human Life,* pp. 303–321; Windelband, *History of Philosophy,* pp. 348–351; Dewing, *Introduction to Modern Philosophy,* pp. 52–54.

the German a new Teuton. The undefined nationalities of the Middle Ages now become clear-cut. Philosophy also becomes now more or less of a national concern.

(*b*) A *New Universe* is now opened to the "New Man" of the Renaissance. Not only in mental equipment, but in scope for his activity, does the European of the Renaissance differ from the mediæval man. The world is actually a new world — new in its geographical outlines and its astronomical relations; new in its intellectual stores from the past. The physical world that supported his body and the intellectual world that refreshed his mind were newly discovered by the man of the Renaissance. We must examine these two new worlds more in detail.

1. The physical universe had undergone a wonderful transformation for man. Our nineteenth century has often been looked upon as a period of extraordinary discoveries; but no discoveries have ever so revolutionized the human mind as those enumerated above as "the external causes of the fall of the society of the Middle Ages." Think how new that old world must have seemed to the common people who had supposed it to be flat, as well as to the scientists who had hypothetically supposed it to be solid — how new it must have seemed when they found that it had been actually circumnavigated! How the horizon of men's minds must have widened when new continents were discovered by sailors and new celestial worlds were found by the telescope of the astronomers! Discovery led to experiment, and the whole new physical world was transformed by the new physical science of Galileo into a mechanical order. It was a wonderful new material world that was discovered and scientifically reorganized at the begin-

ning of the Renaissance. Whereas the common man in mediæval time had found little joy in living, the common man now looked upon the world as a magnificent opportunity. Whereas the mediæval man had turned from the disorders of this wicked world to contemplation of the blessedness of heaven, the man of the Renaissance came forth from the cloister and engaged in trade and adventure. The earth and the things therein had suddenly become objects of emotional interest.

2. Not only was a new geographical and physical world discovered at this time, but also the intellectual world of antiquity was restored. For more than a thousand years in western Europe the literature of the Greeks and Romans had been a thing of shreds and patches, and even then read only in Latin translations. Now the European had come into possession of a large part of it and was reading it in the original. He was aroused to the wonderful intellectual life of the Age of Pericles. The interest in ancient literature, which had been started by Dante, Petrarch, and Boccaccio in the thirteenth and fourteenth centuries, became an absorbing and controlling force at this time. The real interest began with the stimulus received by the coming of the Greek scholars to Italy from the East: first the ecclesiastical embassy in 1438, and afterward in 1453 the large number of refugees from Constantinople at the time of its capture by the Turks. Upon these refugees the patronage of the great Italian nobles — chiefly perhaps in Florence — was lavishly bestowed. The Platonic Academy was founded. Learned expounders of the new learning arose, — Pletho, the two Picos, Fincinus, Reuchlin. Of all the philosophies of antiquity Platonism was favored, and it was interpreted in a mystical manner. Aristotle and Chris-

tianity were looked upon as mere interpretations of Plato. Nevertheless the Renaissance scholars were interested in all the new literary material from the East. They studied the Jewish Cabala and its mystic numbers. They revived Skepticism, Eclecticism, Stoicism, and Epicureanism. Aristotle was represented by two antagonistic schools; and Taurellus opposed both and appealed to the scholarly world to return to Christianity.

The Significance of the Renaissance in History. We have above characterized the Renaissance as a time in which a "new man" found himself living in a "new universe." But the old world of mediæval science, culture, and conventional manners had by no means been entirely outgrown and discarded. Periods of history do not "leave their low-vaulted past" as easily as a man may throw away his coat. Mediæval science and theology still remained, not only as a background but also as an aggressive social factor everywhere. Mediæval scholasticism was something with which the Renaissance had always to reckon. Scholasticism modified, frequently restricted, and even directed the thought of the Renaissance. Consequently when we form our final estimate of the place of the Renaissance in the modern movement, we must not overlook the conservative force of the mediæval institutions existing during the period. The "new man" lived in a "new universe"; and *his problem was how to explain the relation of that "new universe" to himself so that his explanation would not antagonize the time-honored traditions of the church.* This was the constructive problem that gave the Renaissance its place in history.

The first impression, however, of the Renaissance upon the reader is that it stands for no constructive problem

whatever. The changes that usher in the Renaissance seem to speak of an epoch that is entirely negative, destructive, and revolutionary. The period seems from one side to be a declaration against time-honored traditions. The "new man" had risen superior to dogma and to Aristotle. Intellectual fermentation had set in, and never had so many attempts at innovation been so strenuously sought. The love for novelty filled the human mind, and the imagination ran riot. The movement toward modern individualism appeared in the decentralization that at this time was everywhere taking place. Latin, for example, ceased to be the one language for educated men, and the modern languages came into use. Rome ceased to be the only religious centre, and Wittenberg, London, and Geneva became centres. There was no longer one church, but many sects. Scientific centres became numerous. Many of the universities had arisen independently, and now Oxford, Vienna, Heidelberg, Prague, and numerous universities in Italy and Germany afforded opportunities for study equal to those of Paris. To the man who looks upon the Classic Period of Scholasticism in the Middle Ages as the golden age of united faith, — to that man the Renaissance will appear only as the beginning of the disintegration and revolution that he sees in modern times.

But a deeper insight into the Renaissance shows that its revolutionary, negative, and spectacular aspect is not its whole significance. No doubt a strong, universal, and well-centralized government and a unity of faith are social ideals. The reverence in which the name of Rome was held long after the empire had been destroyed, and the reluctance with which the first Protestants separated themselves from the Catholic church, show that the loss

MAP SHOWING THE DECENTRALIZATION OF EUROPE IN THE SIXTEENTH CENTURY

(Note that Rome, Wittemberg, London, and Geneva are the religious centres; that Paris, Oxford, Heidelberg, and Prague are the educational centres; and that Europe is divided into many nations)

of such a unity is a real loss. But the church of the Middle Ages was not the carrier of all the treasure of the past, nor could the church with its own inherent limitations stand as representative of modern times. The new problem which the Renaissance faced might be destructive of much of the traditional past, but it contained many new elements. The "new man" found himself in a "new universe." He was obliged to undertake the solution of a far deeper problem than antiquity had ever attempted. He must orient himself in a larger world than the past had ever imagined. He must do this in the very presence of mediæval institutions, which had not lost their spiritual nor their temporal power. The constructive problem before the man of the Renaissance was therefore an exceedingly complex one. How should he explain his relation to the "new universe" in a way that would not antagonize tradition? It was a new problem, a real problem in which the traditional factor was always persistently present.

There were two *motifs* which give to the problem of the Renaissance its constructive character. These were *naturalism* and *subjectivism. In the first place, the Renaissance is the period when the naturalism of the Greeks was recovered.* By naturalism is meant the love for earthly life. Of this the mediæval church and the mediæval time had little or nothing. The church had been born out of the revulsion from the earthly, and it rose on the aspiration for the supernatural. The Renaissance was, on the contrary, born out of a passionate joy in nature, which joy was intensified by the unexpected possession of the literature of the past and by the discovery of new lands beyond the seas. Man felt now the happiness and dignity of earthly living and the

worth of the body as well as the soul. *In the next place, the Renaissance is marked by the rise of subjectivism.* At the beginning of our book we have already given the meaning of subjectivism (see vol. i, p. 2), and we have characterized modern civilization as subjective in distinction from the ancient as objective and the Middle Ages as traditional. We have also found, as we have gone on, the beginnings of subjectivism in the Sophists, Stoics, and Christians. But in the Renaissance for the first time does the individual as a rational self gain the central position. This is subjectivism: the individual is not only the interpreter of the universe, but also its mental creator. Of the subjective *motif* in modern times the Renaissance marks the inauguration, and German Idealism the culmination. While the world of the ancients was cosmo-centric and the mediæval world was theo-centric, the world of the modern man is ego-centric. The love of life, and the love of life because the individual feels his own capacity for life — this is the situation presented to the man of the Renaissance. Thus in the restoration of naturalism and in the construction of subjectivism did the Renaissance stand for positive upbuilding, in spite of the fact that in all this the period was constrained by the powerful tradition of the church.

The Two Periods of the Renaissance: The Humanistic (1453–1600); The Natural Science (1600–1690). The Renaissance is divided into two periods at the year 1600. The reason for taking this date as a division line will soon appear. The period before 1600 we call the Humanistic, or the period of the Humanities; the period after this date the Natural Science Period.

(*a*) The Similarities of the Two Periods. These two periods are alike in having the same motives. Both feel the same urgent need (1) for new knowledge, (2) for a new standard by which to measure their new knowledge, (3) for a new method of gaining knowledge. From the beginning to the end of the Renaissance the "new man" was feeling his way about, was trying to orient and readjust himself in his "new universe." He was seeking new acquisitions to his rich stores of knowledge, to systematize his knowledge by some correct method, and to set up some standard by which his knowledge might be tested.

(*b*) The Differences of the Two Periods. There are, however, some marked differences in the carrying out of these motives by each period, and to these we must give our attention.

(1) *The Countries which participate in the Renaissance differ in the Two Periods.* In the Humanistic Period Italy and Germany were chiefly concerned. There are two reasons for this. In the first place, these countries had been engaged in commerce with the Orient, had become prosperous and more or less acquainted with the culture of the Orient. In the second place, Italy had been the refuge of the Greek scholars; when the colony of Greek refugees in Florence had died out in 1520, northerners like Erasmus, Agricola, Reuchlin, the Stephani, and Budæus had luckily already made themselves masters of the Greek language and literature, and had carried their learning into Germany.

In the Natural Science Period the Renaissance had practically become dead both in Germany and in Italy. The reason for this is not far to seek. In Italy, in 1563, the Council of Trent had fixed the dogma of the church

and had made it impossible for the church to assimilate anything more from antiquity. The so-called Counter-Reformation set in, and Italy became dumb under the persecutions of the Inquisition. Furthermore, the discovery of the sea-route to the East had turned commerce away from Italy. When we look to Germany, we find a similar situation. The Thirty Years' War (1618–1648) had devastated the land and had made intellectual life wholly impossible.

On the other hand, England, France, and the Low Countries represent the Natural Science Period in the Renaissance. By the War of Liberation (1568–1648) Holland became the European country where the greatest freedom of thought was granted, and it proved itself an asylum for thinkers and scholars. France, through the influence of the University of Paris, was the centre of mathematical research. In England the brilliant Elizabethan era had already begun.

(2) *The Intellectual Standards differ in the Two Periods.* The Humanistic Period has been well characterized as the time of "the struggle of traditions." Naturally enough, with the revival of Greek learning the thinkers of the first period of the Renaissance would try to solve the new problems by the standards which they found in antiquity. What did Aristotle, Plato, the Epicureans say in matters of science? What standards did they yield for solving the new problems of the "new universe"? The traditions of antiquity were therefore revived; and the contention was, Which should be taken as a standard? Among all the ancient systems neo-Platonism became the most prominent. It dominated the Humanistic Period because its æsthetic character and its mystical explanations appealed to the

susceptible mind of that time. Nevertheless, the sway of neo-Platonism was not absolute. The "struggle of traditions" continued throughout the period, as appears in the schisms of the church and in the literary and philosophical contentions.

The Natural Science Period, in its hope of finding a standard to explain the problems of the "new universe," discovered a new standard within the "new universe" itself. No tradition of antiquity had proved itself adequate to the situation. Nothing could be found in Plato and Aristotle to give a theoretic standard for the new discoveries and inventions. Nature disclosed its own standard within itself. The Natural Science Period said *nature facts must be explained by nature facts.* But the question will naturally be asked, Why did the thinkers of this period, when the theories of antiquity were found to be inadequate, turn to nature rather than elsewhere for an explanation of nature? The answer to this is found in the great successes of the physical astronomers, who had started their investigations at the beginning of the Humanistic Period, and had reached the zenith of their glory at the beginning of the Natural Science Period. The discoveries of Galileo were especially important.

(3) *The Scientific Methods in the Two Periods were Different.* The method usually employed in the Humanistic Period was magic. This first period tried to explain nature facts of the "new universe" by referring them to agencies in the spiritual world. In their neo-Platonic nature-worship the scholars of this period imagined that the control of nature was to be obtained by a fanciful linking of the parts of nature to the spirits supposed to be in nature. The Bible is the product of

the spiritual world, so why is not the "new nature-world" inspired from the same source? God is the first cause of all things; He is in all things and each finite thing mirrors Him. All things have souls. To gain control over nature, some all-controlling formula must be found which will reveal the secret of the control of spirits over nature; and to master the spirits that control nature is to control nature herself. Hence arose, as the methods of this first period, magic, trance-mediumship, necromancy, alchemy, conjurations, and astrology. Antiquity could offer (and especially is this true of Platonism) only spiritual causes for nature facts, — hence the search in this time for the philosopher's stone. There was never a blinder groping after a method.

The scientific method used in the Natural Science Period was the mathematical. The world of experience was found to coincide with the number system, and therefore mathematics was used as the symbol to determine the form of nature events. Induction and deduction were used in different combinations. The period has been characterized as the time of "the strife of methods." Induction and deduction became in fact the new methods of finding the truth about the "new world." Whatever is clear and distinct, like the axioms, must be taken as true. All other knowledge must be deduced from these axiomatic certainties. In contrast with the magical methods of the Humanistic Period, which point beyond nature for an explanation of nature, here in the Natural Science Period mathematics need not lead the explanation farther than nature herself.

(4) *The Attitude of the Church toward Science differs in the Two Periods.* In the Humanistic Period

the attitude of the church toward the new learning was not yet defined. This was because the bearing of the new learning upon dogma was not yet understood. On the one hand, on matters upon which the church had clearly declared itself, it was easily seen what could and what could not be believed. But, on the other hand, the significance of much of the wealth of the newly acquired learning could not at first be fully determined. The enthusiasm for science was so widespread, and the new discoveries were so many, that the church was unable to know what was consistent with dogma and what was not. At the outset the church was inclined to treat the new science with contemptuous toleration. Nevertheless, in spite of the new intellectual intoxication there was no real freedom of thought. The position of science was merely precarious, uncertain, and undefined.

In the Natural Science Period this uncertainty was dispelled because dogma came into violent conflict with science. It was soon found that questions in physics involved metaphysics, and that the new science touched the church doctrines at every point. In 1563 the church authorities at the Council of Trent settled dogma for all time. Great conflicts arose between the church and the secularizing spirit. The scientist became wary. He tried to avoid any intrusion upon the field of theology, and he insisted that his own field existed quite independent of theological dogma. But practically it was impossible for science not to take heretical positions, and this was especially true of the Rationalistic School, which tried to construct a new scholasticism. Safe independence of thought was not gained until the next period (the Enlightenment), and this was brought to pass by political changes.

A Brief Contrast of the Two Periods — A Summary of the Discussion above.

The Humanistic Period.

(1) The Time — 1453–1600.

(2) The Countries Concerned — Italy and Germany.

(3) The Intellectual Standards — Neo-Platonism and other theories of antiquity.

(4) The Method — magic.

(5) The Relation of Science to the Church — precarious and uncertain.

The Natural Science Period.

(1) The Time — 1600–1690.

(2) The Countries Concerned — England, France, and the Low Countries.

(3) The Intellectual Standard — the mechanism of nature facts.

(4) The Method — induction and mathematical deduction in various combinations.

(5) The Relation of Science to the Church — so definitely stated as to be placed in conflict with dogma.

CHAPTER III

THE HUMANISTIC PERIOD OF THE RENAISSANCE (1453–1600)

The Long List of Representatives of the Humanistic Period. There was a revival of *scholasticism*, — Paulus Barbus Socinas (d. 1494), Cajetan (d. 1534), Ferrariensis (d. 1528), Melchior Cano (d. 1560), Dominicus de Soto (d. 1560), Dominicus Banez (d. 1604), John of St. Thomas (d. 1644), Vasquez (d. 1604), Toletus (d. 1596), Fonseca (d. 1599), Suarez (d. 1617), John the Englishman (d. 1483), Johannes Magistri (d. 1482), Antonius Trombetta (d. 1518), Maurice the Irishman (d. 1513). Among the *Humanists* were Pletho, Bessarion (d. 1472), Lorenzo Valla (d. 1457), Marsilio Ficino (d. 1499), Giovanni Pico della Mirandola (d. 1494), Francesco Pico della Mirandola (d. 1533), Theodore of Gaza (d. 1478), Agricola (d. 1485), George of Trebizond (d. 1484), Justus Lipsius (d. 1606), Schoppe (b. 1562), Paracelsus (d. 1541), Reuchlin (d. 1522), Fludd (d. 1637), Montaigne (d. 1592), Charron (d. 1603), Sanchez (d. 1632), Pomponatius (d. 1530), Achillini (d. 1518), Nifo (d. 1546), Petrus Ramus (d. 1572), Scaliger (d. 1558). The *Italian nature philosophers* were Cardano (d. 1576), Telesio (d. 1588), Patrizzi (d. 1597), Bruno (d. 1600), Campanella (d. 1639). The notable *scientists* were Cusanus (d. 1464), Copernicus (d. 1543), Tycho Brahe (d. 1601), Kepler (d. 1631).

The Protestant Mystics were Luther (d. 1546), Zwingli (d. 1531), Franck (d. 1545), Weigel (d. 1588), Boehme (d. 1624). The *political philosophers* were Macchiavelli (d. 1527), Thomas More (d. 1535), Jean Bodin (d. 1597), Gentilis (d. 1611), Althusius (d. 1638), Hugo Grotius (d. 1645).

As examples of the first epoch of the Renaissance * we have selected Cusanus (1401–1464), Paracelsus (1493–1541), and Bruno (1548–1600). These three men will represent fairly well the wide interests of this epoch, and more especially its neo-Platonic spirit and its methods. The reader will see from their dates that the lives of these three philosophers nearly cover the Humanistic Period. Cusanus lived during the last half century of the Middle Ages and the first decade of the Humanistic Period; Paracelsus's life covers the middle of the Humanistic Period; Bruno lived during the last part of the period, and his death (1600) coincides with the last year of the period. All three were neo-Platonists. They had been so impressed with the nature-world that had opened before them that they were mystic nature-worshipers — pantheists, to whom neo-Platonism became the truest philosophical standard. All three were scientists in different degrees. Yet Cusanus, the cardinal of the church, and Bruno, the speculative philosopher, contributed more to science than Paracelsus, who aspired to medical science. This seeming inconsistency in their lives is not difficult to explain. Paracelsus merely reflects the science of the time; while Cusanus and Bruno anticipate the Natural Science Period — the one by his empirical discoveries, the

* Read Eucken, *Problem of Human Life*, pp. 321–331; Windelband, *Hist. of Phil.*, pp. 352–354.

other by his mystic speculations which were almost prophecies.

Nicolas of Cusa (1401–1464). Modern German scholars place Nicolas of Cusa (Nicolas Cusanus) with Bacon and Descartes, as the leaders of the modern philosophical movement. Nicolas lived two hundred years before Descartes and one hundred years before Bacon. The German estimate of him shows at least that he was modern in his thought, although he belongs in time to the Middle Ages for the most part. He lived when the Middle Ages were passing over into the Renaissance. His principal work, the *Idiota*, was published in 1450, when the Renaissance was on the threshold. He was certainly a forerunner of modern times. He was a German, a cardinal, and is now reverenced by liberal Catholics as one of their deepest thinkers.

Cusanus was a scientist of no small merit. He died before the great discoveries were made; but he anticipated Copernicus in his belief that the earth rotated on its axis; he anticipated Bruno in conceiving space to be boundless and time unending; he proposed a reform in the calendar; he was the first to have a map of Germany engraved. He condemned the prevalent superstitions of the church and the use of magic in explaining nature events. Thus he anticipated the science of the time of Bacon, Hobbes, and Descartes, and transcended his own period.

In other respects Cusanus belongs in this period with Bruno and Paracelsus. He did not seek to discover a new method; but he turned back to the revived traditional Greek systems for an explanation of the "new world." He found in the mystic numbers of Plato and the Pythagoreans the principle of all scientific investiga-

tion. The world of nature phenomena must be accounted for by the spiritual world. Cusanus uses almost the identical language of Bruno, when he says that the world is the mirror of God and that man is an epitome of the universe. In the neo-Platonic spirit of the Humanists, he regarded the world as a soul-possessing and articulate Oneness. Although a scientist, he conceived science to be only a conjecture, which in its unreality reveals the inner interconnections of the real world — the world of the spirit.

Paracelsus (1493–1541). Paracelsus did not transcend his time as did Cusanus. He merely expressed it. He was the exponent of its science as Bruno was the representative of its poetic speculation. Paracelsus was a much-traveled Swiss, who tried to reform the practice of medicine by a kind of magical chemistry. The poet Browning makes his adventures the basis of a poem. As a physician Paracelsus could employ the magic arts without much danger of the charge of heresy, for the practice of the magic art was theoretically justified by the neo-Platonism of the time. The Faust of Goethe is at first a Paracelsus. The universal spirit behind nature presents itself in an infinite number of spiritual individuals. Nature facts are to be understood and mastered by understanding the activities of these spiritual forces. In this way medicine became a brewing of tinctures, magical drinks, and secret remedies. It was an alchemy which grew to the proportions of a science. The alchemists of the time expected to discover a panacea against disease, which would give them the highest power. This is the meaning of the "philosopher's stone," which was to heal all diseases, transmute everything into gold, and bring all spirits into the power

of its possessor. Paracelsus thus turned back to Greek hylozoism for the truth about physiology and the cure of disease; and he met with some degree of personal success, for his physics had many adherents both in theory and in practice.*

In the neo-Platonic manner Paracelsus conceived the world as fundamentally a developing vital principle (Vulcanus). Man is this cosmic force individualized (Archæus). The laws that operate in the world are the same as in man, except that in man they are hidden. The study of nature's laws, as they lie open, will reveal how those same laws operate in a human being. Now the vital principle in nature manifests itself in three realms: the terrestrial, the astral or celestial, and the spiritual or divine. The Archæus or vital principle in man must have the same realms of activity. There is man's body, which gets its strength from the terrestrial realm of nature; man's mind, which is nourished by the stars; man's soul, that feeds on faith in Christ. Perfect health, therefore, consists in the sympathetic interaction of these three realms in man. A complete medicine consists of physics, astronomy, and theology.

But Paracelsus was a chemist, and the terrestrial nature of man was his peculiar interest. The theologian may prescribe for the human soul, and it is the duty of the astronomer to care for the human intellect; but the practical physician must understand the human body. Here is the Archæus imprisoned in the gross terrestrial body! It is in continual warfare with that body. What is the nature of that body which is so hostile to the human vital principle? Here Paracelsus introduces his

* Read Falckenberg, *Hist. of Modern Phil.*, pp. 27–28; Browning, *Paracelsus;* Goethe, *Faust*, lines 1–165.

strange chemical analysis which characterizes him as a Renaissance physician. Nature has three essences of which all bodies are composed: (1) mercury, that makes bodies liquid; (2) sulphur, that makes them combustible; (3) salt, that makes them rigid. These essences are compounded in such a way that from them the four elements — earth, air, water, and fire — are derived. Each one of these elements is controlled by elemental spirits. The earth is controlled by gnomes, the water by undines, the air by sylphs, and the fire by salamanders. Thus the chemical analysis of Paracelsus discovers four sets of spirits with which the physician is obliged to deal. Gnomes, sylphs, undines, and salamanders are in warfare with the human vital principle for control. When the Archæus is in any way checked by these, there is disease; when the Archæus has them under control, the man has health. The medicines that the physician administers are determined by their effectiveness in helping the Archæus in its battle against the hostile spirits. This makes medicine a field for the magician in the control of spirits.

Giordano Bruno (1548–1600). The neo-Platonic spirit of the Humanistic Period reached its most complete development in the æsthetic philosophy of Giordano Bruno. He sang the world-joy of the æsthetic Renaissance. Italy ordained him priest, exiled him as heretic, and then burned him at the stake as recalcitrant. Italy has produced very few great speculators since his day. The Council of Trent met when he was fifteen years old; already the counter-Reformation had begun in Italy, and Italy was soon to become an intellectually arid waste. The influence of Bruno appears in Spinoza and perhaps in Leibnitz. His one contribution to modern science was

in his inspired conception that because God is infinite, the world is infinite in space and time. The philosophers who influenced his thought were Pythagoras, Plato, Plotinus, and Lucretius.

The fundamental thought of the Humanistic Period was expressed by Bruno in his imaginative conception of the divine beauty of the living All. Poet as well as philosopher, he was consumed by a love for nature as a beautiful religious object. He revolted from all asceticism and scholasticism. The "new world" in which he found himself was to him the emblem of God. The thought of that chief of neo-Platonists, Plotinus, of the beauty of the universe had never been so sympathetically regarded as by the Renaissance; in the hands of Bruno this beauty became the manifestation of the divine Idea. Philosophy, æsthetics, and religion were identical to him. To express his thought he employed the usual neo-Platonic symbol of the all-forming and all-animating light. Bruno was no patient student of natural phenomena as such, but a lover of the great illumination of nature facts by the great soul behind them. He was not interested in any single group of phenomena, as was Paracelsus; but he loved them all as a religion. Not only externally but internally is the universe an eternal harmony. When one gazes upon it with the enthusiasm of a poet, its apparent defects will vanish in the harmony of the whole. Man needs no special theology, for the world is perfect because it is the life of God. Bruno is a universalistic optimist and a mystic poet. Before this cosmic harmony man should never utter complaint, but should bow in reverence. True science is religion and morality.

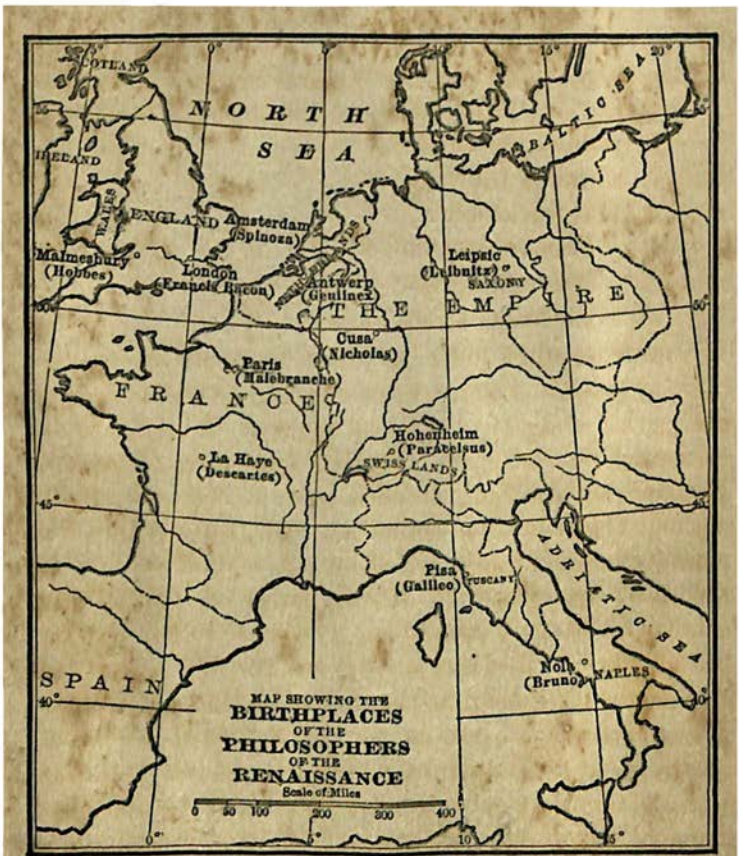
Since Bruno conceived no theodicy (proof of the

goodness and justice of God) to be necessary, he did not define in exact terms his conception of God. Nevertheless, to escape the charge of atheism, he distinguished between the universe and the world. For him God = the universe = nature = matter = the principle immanent in the world. The "world," on the other hand, = the sum-total of nature phenomena. The "world" is the body of God, and God is the soul of the "world." God is *natura naturans;* the world is *natura naturata.*[1] Just as the sum of the parts of man's body does not equal the man himself, so to identify God with the totality of objects of nature is atheism in the true sense. It is to make God a finite being, although very big. In opposition to this, Bruno conceives God as the one substance manifesting himself through all things. This is to magnify God and to make him really omnipresent.

Nevertheless, Bruno is involved in all the inconsistencies of the Mystic. In a neo-Platonic fashion he frequently speaks of God as if he were a plural number of atoms. God is not only the world unity, but in every particle of the world is He writ small. The elements of the world are monads, and each is the mirror of the All. The Absolute is the primal unity; and yet in the paradoxical fashion in which the neo-Platonist is so successful, Bruno says that all creation is unfolded out of God and is included in him. The speculative poet is so in love with the world that he does not stop to make consistent the distinctions which he has

[1] These two phrases will be found again in the philosophy of Spinoza. Nature is conceived as having two aspects: one is *natura naturans*, or God as the animating principle of nature; the other is *natura naturata*, or the world as materialized forms or effects.

drawn. The *natura naturans* and the *natura naturata*, the unity and plurality of the world, are the two aspects of the reality in his own life — and that reality is God.



MAP SHOWING THE BIRTHPLACES OF THE CHIEF PHILOSOPHERS OF THE RENAISSANCE

(The names of the philosophers are given in brackets beneath the towns in which they were born)

CHAPTER IV

THE NATURAL SCIENCE PERIOD OF THE RENAISSANCE (1600–1690)*

The Philosophers of the Natural Science Period.

1. Galileo, 1564–1641, and the group of scientists.
2. Bacon, 1561–1626.
3. Hobbes, 1588–1679.
4. The Rationalists.
   - Descartes, 1596–1650.
   - Spinoza, 1632–1677.
   - Leibnitz, 1646–1716.

Countries other than Italy and Germany come upon the philosophic stage during the eighty-nine years of the period of teeming natural science. England is represented by Bacon and Hobbes, France by Descartes, Holland by the Jew, Spinoza, and, at the end of the period, Germany by Leibnitz. Still Italy yields the most influential thinker of them all, — Galileo, who is the most prominent of a long series of astronomers coming from many countries. The most completely representative is Descartes, who was the founder of the Rationalistic school; for he was not only interested in mathematics itself, but in the application of mathematics to metaphysical questions. Neither as influential as Galileo, nor as comprehensive as Descartes, the Englishmen, Bacon and Hobbes, were nevertheless important as the forerunners of the English empirical school. Spinoza is more of a "world's philosopher" than any of the others, and he joins in his doctrine the scholasti-

* Read Windelband, *Hist. of Phil.*, pp. 378–379.

cism of the Middle Ages and the mathematics of the Renaissance; while Leibnitz occupies the position between the Enlightenment and the Renaissance.

The Mathematical Astronomers. After enthusiastically canvassing the traditional theories of antiquity, the Humanists had been unable to find one which would explain and organize the newly accumulated materials of their "new world." But working in more or less narrow circles, natural science had already made a beginning in the midst of the Humanists. Beginning with Copernicus, an interest in physics and astronomy had been aroused, but in these early days it was more speculative than empirical. The speculations of the astronomers had but little influence upon their own time. However, when the ancient theories proved inadequate to explain the facts of the "new world," and especially when the empirical researches of Galileo confirmed the speculations of his predecessors, the Renaissance turned away from antiquity to nature herself for an explanation. This was about the year 1600, the year of the beginning of the Natural Science period.

The most prominent of these astronomers were —

Copernicus,	1473–1543, a Pole.
Bruno,	1548–1600, an Italian.
Tycho Brahe,	1546–1601, a Dane.
Kepler,	1571–1630, a German.
Galileo,	1564–1641, an Italian.
Huyghens,	1629–1695, a Hollander.
Newton,	1642–1722, an Englishman.

While the greatest of these scientists is Newton, who belongs to the next period, the most influential is Galileo. Modern *methods in science* began with Galileo. Of the four predecessors of Galileo three — Coperni-

cus, Tycho Brahe, and Bruno — are in spirit Humanists; for their final explanation of nature is the world of spirits. Kepler belongs to both the Humanistic and Natural Science periods; for at first he constructed his natural science by an amalgamation of the doctrine of spirits and the Copernican theory; but in the latter part of his life he adopted completely the mechanical view of nature. The above scientists may be divided for convenience into two groups: (1) the speculative scientists before Galileo; (2) Galileo and the following empirical investigators.

For fourteen centuries the ancient Ptolemaic astronomy had been regarded by the learned as beyond question. Although complex and unwieldy, it explained all phenomena satisfactorily enough as they appeared to the senses; and it brought phenomena into a system. (The Ptolemaic system has been fully described in vol. i, pp. 322 ff.) To recapitulate it: the world-all was conceived as a hollow sphere with the earth as the centre and the fixed stars in the periphery, while the planets were supposed to move in epicycles. The universe was divided into the heavenly and terrestrial realms, which were occupied by various spirits. God resided outside this hollow sphere and held it, as it were, in his lap.

The history of the changes leading up to our modern astronomical conception makes a vivid chapter. How Copernicus contributed the idea of placing the sun at the centre of things, Kepler the idea of the orbits of the planets as ellipses, Bruno the idea of the boundlessness of space and time, and how Galileo, corroborating these theories by empirical investigations, was put under the ban of the church — all this shows what heroism must have been required to tear down a time-honored

and firmly intrenched traditional conception. Probably the speculative astronomers were not conscious that they were undermining the whole astronomical structure, and probably their sole motive was to simplify the Ptolemaic conception, not to destroy it. For Copernicus accepted the Ptolemaic system, except that he put the sun instead of the earth at the centre, and thereby simplified it by making many of the epicycles unnecessary; and Kepler simplified it further by supplanting the epicycles with ellipses. However, the result was inevitably an entirely new conception of the universe, and with it a new conception of the relation among particular material things. It was in this way that new scientific methods arose.

The universe now comes to be regarded as a mechanism, and what was formerly looked upon as the influence of spirits or as Providential guidance becomes an impersonal law of causal necessity. In the heavens above and the earth beneath there are no longer vital forces and supernatural influences. *The universe becomes a homogeneous whole throughout*, in which there is no difference between the fall of an apple and the revolution of the planets, no distinction between terrestrial and celestial spheres. The Christian heaven is nowhere in it; the Mediæval spirits are banished from it. The Greek gods have been pushed out, and the Christian God has been made to stand aside.

The demand that the new conception of the universe be verified in concrete experiments, if it were to replace the old Ptolemaic system, the revival of the study of Archimedes, the rivalry in trade and inventions among the Italian towns, were three causes for the demand for greater exactness. Investigation, experiment, and inven-

tion came into vogue. Magic, alchemy, astrology, and conjurations were no longer accepted as serious methods. In the Middle Ages deduction had been purely the logical employment of the syllogism in theological discussions, while induction, so far as it was used at all, had been the reference of nature phenomena to spiritual forces. Now deduction and induction [1] come to be used for other purposes, and mathematics is necessarily conjoined with both. The new Natural Science period is essentially a "strife of methods"; it is the period when the true plan of scientific procedure is being determined. It is here that the importance and influence of Galileo is seen upon modern science and philosophy.

The influence of mathematics in modern times grew up from these astronomical beginnings among the Humanists; and the Natural Science period with its contention as to methods was the immediate result. Bacon, for example, regarded final causes as one of the "idols." Hobbes maintained that physics has only to do with efficient causes; Descartes held that it is audacious in man to think of reading the purposes of God in nature; while Spinoza thought it absurd to attribute divine purpose to nature. By degrees everything in nature came to be regarded as a mechanism, and there was no distinction between the animate and the inanimate. The discovery of the mechanical circulation of the blood by Harvey, in 1626, became a vigorous impulse toward the mechanical study of animal life. Descartes regarded animals as complex automata and on this line he published essays on dioptrics, musical law, and the

[1] Induction and deduction are methods of reasoning. Induction is the method of beginning with particular cases and inferring from them a general conclusion. Deduction is the opposite method of reasoning.

fœtus. Hobbes applied mechanical law to psychological phenomena. The study of reflex action was carried on with great vigor in the Low Countries and France. The mechanical theory was rendered complete in this early time by the exclusion of the soul from the explanation of the body of man, just as God had been pushed into the background of the universe.

Galileo Galilei (1564–1641).* The dates of the life of Galileo show him to have been a younger contemporary of Bruno, and, like Bruno, to have been a victim of the ecclesiastical reaction that was sweeping away all scientific freedom in Italy. But while Bruno belonged both chronologically and in spirit to the first period of the Renaissance, Galileo is the true beginner of the second period. Bruno was a philosopher of nature, while Galileo was a true scientist. *Galileo gave to all future thought a wisely formulated method of dealing with the new materials of the nature world.* His laws of projectiles, falling bodies, and the pendulum created a new theory of motion. He set the hypothesis of Copernicus upon an experimental basis and made the future work of Newton possible. He was professor at the Universities of Padua and Pisa, and he was mathematician and philosopher at the court of Tuscany. That he perjured himself and thereby saved his life from the Inquisition, there is no doubt; but instead of death he had an old age of great bitterness. He gave open adherence to the Copernican system in 1610, when he constructed a telescope and discovered the satellites of Jupiter; and after this there followed discovery after

* Read Höffding, *Hist. of Phil.*, vol. i, p. 175; Ball, *Hist. of Math.*, pp. 249 ff.; Falckenberg, *Hist. of Mod. Phil.*, pp. 59 ff.

discovery, like the spots on the sun and the phases of Venus, which latter discovery confirmed the Copernican hypothesis. He invented the hydrostatic balance, the proportional compass, the thermoscope, microscope, and telescope. His two most noteworthy writings are *The Dialogue concerning the Two Most Important World-Systems*, and *Investigations into Two New Sciences.*

As to method, Galileo objected to formal logic, that it is not a means of discovering new truth, although valuable as a corrective of thought. New truth is discovered when we frame an hypothesis from certain experiences, and then infer the truth of other cases from that hypothesis. The hypothesis is first formed by induction from a few characteristic cases; the inference to other cases is made by deduction. He therefore linked induction and deduction closely together, and conceived them as necessarily complementary in scientific investigation. Either induction or deduction alone is absurd and impossible. By induction alone we should be obliged to examine all cases, an impossible undertaking. By deduction alone we should be in the same straits as the Scholastics, and never discover new laws. We must begin with our perceptual experiences and make an induction from them; then we must bring mathematics into use in constructing the hypothesis from which to deduce (calculate) new cases. This is the true, modern method and reveals the great genius of Galileo.

A mathematical law never exactly coincides with any particular concrete relations. A mathematical law is an hypothesis or ideal construction. What value, then, has a mathematical law for science? The orbits of planets [1]

[1] An example used by Galileo is the law of the velocity of falling bodies in empty space.

are described as ellipses, but no actual planet moves in a perfect ellipse. The ellipse is an hypothetical, mathematical orbit for a planet which has no disturbing influences upon it. We get at such a law by the method of concomitant variations;[1] and the value of it consists in the simplification and system that it gives the facts. For example, knowing that a planet would move in an ellipse if it suffered no perturbations, and then knowing the influences upon any particular planet, we can calculate its orbit. Mathematical law, although ideal, is the common rule under which all nature phenomena can be brought. However, only by measurements founded on the tests of observation and experiment can we know how far the claims of such deduction are supported. Measure everything measurable, and calculate the measurement of those things not directly measurable.

Nature, therefore, must be called upon to explain her own phenomena. Since the laws of nature are found by investigating nature phenomena as we experience them, the laws must be a part of nature and can be found nowhere else. To explain nature phenomena by referring them to spiritual influence is no real explanation. To say that God moves the planets is to involve the subject in mystery. Here is where Galileo shows that he does not belong to the Scholastics or the Mystics or the Humanists. He searched for some constant element, and not for a "vital force" behind nature phenomena. He declared this constant element to be motion —measurable motion. He is the author of the theory that mechanics is the mathematical theory of motion.

[1] The name, "concomitant variations," was later given by John Stuart Mill.

Science was therefore taken by him out of the paralyzing grip of the theologian.

The Life of Francis Bacon, Baron Verulam (1561–1626). Francis Bacon was a native of London and received his university education at Cambridge. He was in the English diplomatic service at an early age, but he later returned to London and took up the legal profession. At the age of thirty-two he entered Parliament and became immediately distinguished as a debater. At forty-three he became legal adviser of the crown, and when he was fifty-six he was made Lord Chancellor. After a brilliant career in public office he was accused and convicted of bribery and corruption, deposed from office, and heavily fined. His most notable writings are his *Essays*, two parts of his uncompleted *Instauratio Magna*, viz., *De Dignitate et Augmentis Scientiarum* and *Novum Organum*, and his *New Atlantis*, a Utopian fragment.

The Position of Bacon in Philosophy. Tradition has frequently placed Bacon as the founder of modern philosophy. This estimate is due to a remark by Diderot, which was repeated by many French writers. The estimate, however, rests on a misapprehension of Bacon's influence. Bacon was more of a Humanist than a technical philosopher, and in his constructive philosophy he seems not only to have had no influence upon his contemporaries, but also to have been uninfluenced by them. He was unconscious of the influence of Kepler and Galileo and their mighty scientific constructions. Bacon's *Novum Organum*, which embodies his scientific methods, had no influence upon his own time, nor was it read in the seventeenth century. Its influence was first felt in the eighteenth century. However, all this

must be qualified in one respect. Bacon's *New Atlantis* did have an immediate influence. The ideal of a college of science, which Bacon presented in his *New Atlantis*, was not only the cause of the work of Diderot in his *Encyclopedia* in the eighteenth century, but what is more important, it had effect in his own time. It led to the founding of the Royal Society, thirty-six years after Bacon's death, and later to the founding of similar academies abroad. While the reader may be confused by the conflicting estimates of Bacon, the words of his own countryman, Sir David Brewster, may be accepted as embodying the truth: "Had Bacon never lived, the student of nature would have found in the works and writings of Galileo not only the principles of inductive philosophy, but also its practical application to the noblest efforts of invention and discovery." So far from being the founder of modern science, Bacon developed only one side of it, the inductive side, and that without success. He identified deduction with the Aristotelian syllogism, and he was therefore unaware of the importance of the use of mathematics in the method of deduction. He did not seem to have the slightest idea that mathematics was going to be the scientific method; consequently science has gone much further than Bacon dreamed it would go. Bacon's importance in the Renaissance does not consist in his contribution to the content of philosophy or to his successful formulation of the scientific method.

Wherein then lies the value of Bacon's work as a philosopher? * Bacon was the first in England to col-

* Read Ball, *Hist. of Math.*, pp. 233 ff.; Höffding, *Hist. of Mod. Phil.*, vol. i, pp. 184–186; Macaulay, *Essay on Bacon;* Bacon, *Essays, — Studies, Truth, Friendship,*

lect the fruits of the Renaissance and give them a secular character. Taking them out of the hands of the theologian, he, a lawyer, "gave them a legal existence by the most eloquent plea that has ever been made for them." It was a time when philosophy and science were passing out of the hands of the theologian; and Bacon, feeling that science, including philosophy, should be secularized, drew a sharp line between the work of science and that of theology. Out of his great contempt for antiquity, Bacon voiced for England the contemporary reaction against the old scholastic methods. *He set up the ideal* and gave directions for following it. He issued the call to go from abstractions back to things. A man of worldly wisdom and pungency, his nature was buoyant in its belief in the coming age. He had confidence amounting to an optimism that final principles would be found to explain all the particulars of the "new world." He was a prophet who outlined his prophecy. He felt that not only nature but all the activities of man would be reduced to some simple principles. He shared and expressed the confidence of his time that wonderful things were to be revealed; that nothing is impossible to man, provided man hits upon the right key to nature's secrets. Just as every age, that feels itself upon the threshold of a new epoch, writes Utopias,[1] so Bacon wrote the *New Atlantis*, the Utopian fragment, for his age. This is the literary expression of his optimism

Simulation, and Dissimulation; Abbott, *Francis Bacon;* Eucken, *Problem of Human Life,* pp. 336–344; Rand, *Modern Classical Philosophers,* pp. 24–56.

[1] Bacon wrote his *New Atlantis* in 1623. The same year Campanella wrote his *State of the Sun*, and the preceding year Thomas More wrote his *Utopia.*

about the future of a distinctively secular science. The world of the *New Atlantis* is the world of new machines. Bacon's most ambitious scientific contribution to the same end is his *Instauratio Magna.* Of this only two parts were completed: *De Dignitate et Augmentis Scientiarum* and *Novum Organum.* Bacon is best known in philosophy by the second part, which was thus named to contrast it with the "old." *Organum* of Aristotle.

The high influence that Bacon gained later among philosophers may therefore be accounted for by the association of his eminent position and wonderful personality with his bold expression of this congenial utilitarianism. Even in that rich Elizabethan age of English literature, he was prominent as a writer and politician. He had occupied high political positions under James I; but his peculiar personality would in itself have attracted attention, for his genius was such that any of the products of that age — even the plays of Shakespeare — have seemed possible to him. Pope describes him as "the wisest, brightest, meanest of mankind." Macaulay says in his essay, *Bacon,* that there were many things that he loved more than virtue and many that he feared more than guilt. His career shows that he loved himself, wealth, and learning. His unusual love for learning may be safely taken as his excuse for his unscrupulous lust for wealth. His great versatility prevented his success in any one direction, but he had the power of expressing the feeling of his impressive age and of becoming its personal representative.

The Aim of Bacon. Bacon sought to secularize philosophy by making it the same as science. It was the age when Nature was conceived to be identical with the

world of the natural sciences. Bacon stood in this age as the formulator of the scientific usefulness of philosophy. Philosophy is to ameliorate social conditions and enrich human life by bringing nature under control. Ancient and mediæval times had not been occupied with the improvement of human society, but Bacon was inspired with the feeling of the modern statesman for such improvement. The true test of philosophy, according to Bacon, is what it will do. That philosophy is worth while which will effectively remove the weighing conditions upon human society, so that there are no longer two classes,—those that sacrifice and those that satisfy their ambitions. This dominant utilitarian motive in Bacon sets him in opposition to pure theoretical and contemplative knowledge, and makes him the father of utilitarianism and positivism[1] in England.* Knowledge is the only kind of permanent power, and man can master the world when he gives up verbal discussions and belief in magic. Man must gain a positive insight into nature. Science and philosophy must be separated from theology, and philosophy must be reduced to science. Thus while aiming to give a tangible form to the scholastic doctrine of the "twofold truth," Bacon through his utilitarianism missed the goal reached by Galileo and Descartes.

The Method of Bacon. Bacon says that the method of the scientist should not be like that of the spider

[1] Utilitarianism regards adaptation to general happiness as the ideal of society. Positivism, broadly used, is that philosophy which limits the scope of thought to the observation of facts, although the observations are inferior to the facts. The data and methods of positivism are the same as those of natural science, and opposed to the *a priori* methods of metaphysics.

* In this connection read Herbert Spencer, *Education.*

that spins a web out of himself, nor like that of the ant which merely collects material, but like that of the bee which collects, assimilates, and transforms. Bacon's original inspiration had been his respect for method, and this grew more pronounced. Philosophy, *i. e.* science, is method. With Bacon we see the beginning of philosophy cut loose from personality and over-valued because it had mechanical accuracy. Nevertheless, the method of Bacon was very comprehensive. It included on the one hand a critical survey of the past, and on the other an anticipatory programme for the science of the future. Let us now turn to these two aspects of his method.

(*a*) *Bacon's criticism of the past* was a trenchant criticism of prevailing philosophy, and amounted to a break with the past. Bacon felt that what passed for science in his day was but a pretence. In the presence of the facts of life traditional science was but empty words. The early thinkers are not the ancients. We are the ancients, for we embody in ourselves all the preceding centuries. Thus does Bacon swing from the mediæval blind acceptance of the past to an equally blind rejection of the past. But why did the ancient thinkers err? Not because they were not men of talent, nor because they lacked in intellectual opportunity; but because their method of procedure led them astray. The early thinkers followed wrong paths, and their results, which we now possess, are vain.

What must be our attitude in the presence of this traditional philosophy? We must dispossess ourselves of the prejudices that have misled the past, for they form the obstacles to our true knowledge of the world. The roots of the errors that have infected philosophy

are "fantastic, contentious, and delicate learning." We must not, indeed, trust to our every-day perceptions; for although science is based on our perceptions, our every-day perceptions are corrupted by our uncritical habits of thought. Thus there have arisen perversions and falsifications, of which we must first of all be rid. Bacon calls these Idols.[1] Idols are false images, that intervene between us and the truth and are mistaken for reality. Bacon makes four general classes of Idols: —

(1) The Idols of the Tribe, or the presuppositions common to the human race.

(2) The Idols of the Cave,[2] or individual prejudices due to natural individual disposition, situation in life, etc.

(3) The Idols of the Forum, or the traditional meanings of words, by which we substitute the word for the idea. These are the worst illusions.

(4) The Idols of the Theatre,[3] the theories or philosophic dogma, which command discipleship from groups of men and have not been subjected to our own criticism.

Bacon's classification of our prejudices as Idols is a critical attempt to separate, in what passes for knowledge, the subjective, which has become traditional, from the real. Logic, religion, and poetry have had a bad effect on science, as is especially shown in the theatrical character of philosophy.

(*b*) Having dispossessed ourselves of our prejudices or

[1] Bacon chooses the word Idols, because it is the same as the Greek word for false forms (eidola, εἴδωλα).

[2] Bacon is here alluding to Plato's myth of the cave. Read Plato, *Republic* (Jowett's trans.), Bk. VII, 514 A–520 E.

[3] Bacon is satirical here and is likening philosophical systems to stage-plays.

Idols, we are ready to proceed to a positive construction of a scientific method of work. By what, in general, ought science to be guided? By induction and experience. Bacon suggests the following steps for the science of the future: —

(1) There must be an exhaustive collection of particular instances.

(2) There must then be an analysis and comparison of these instances, for to Bacon induction was not a mere enumeration of single instances. Negative instances, and instances of difference of degree, must be taken into account. Hasty generalizations must be avoided, and we must ascend gradually from the particular to the general.

(3) The simple "form" of the phenomenon must be discovered. Of the four causes of Aristotle, Bacon emphasizes the "formal." By "form" Bacon means the nature that is always present when the phenomenon is present, absent when the phenomenon is absent, and increases or decreases with the phenomenon. The "form" is the abiding essence of the phenomenon.

The English Natural Science Movement. The natural science movement in England thus received at the start the impression of the sober Anglo-Saxon mind. Through its entire history English philosophy differed from that of the Continent. Here at the outset the Englishman is skeptical, not only of scholastic deductions from dogma, but also of deductions of all kinds.[1] He prefers the slow road of patient empirical discovery. Even pure contemplative knowledge and the deductions of mathematics have little charm for him. To be sure, induction even in the hands of an Englishman demands

[1] But see the contradiction in the theory of Hobbes.

by its nature the establishment of a general principle, but Bacon would have refused to use such a deduction to establish a new truth in the way that Galileo used his mathematical hypotheses. According to Bacon, an hypothesis is true only so far as it has already received the indispensable sanction of experience.

Thomas Hobbes* and his Contemporaries. During a certain period Bacon had under him a secretary by the name of Thomas Hobbes. Here was an obscure man turning to philosophy because of his interest in politics; whose point of attachment to philosophy was the mechanical theory of nature, so universally accepted by the scientists of that time. No contemporary of Hobbes — neither Bacon, Descartes, nor Galileo — had so systematic a philosophy. No other man succeeded better in expressing all that was in his mind. Hobbes was one of a large group of political theorists of the Renaissance. When the mediæval idea of the universal Christian state, such as was embodied in Augustine's *City of God*, was no longer held, many of the Humanists tried to construct theoretical systems of political government that would meet the demands of the time. Macchiavelli, Thomas More, Bodin, Althusius, and Grotius[1] belong to this group. Hobbes is best known in modern times as a writer on this aspect of moral

* Read Robertson, *Hobbes* (Blackwood's *Phil. Classics*), pp. 204–206; Falckenberg, *Hist. Mod. Phil.*, pp. 71–72; *Encyclopædia Britannica*, article, "Hobbes"; Leslie Stephen, *Hobbes;* Watson, *Hedonistic Theories*, pp. 73–94; Turner, *Hist. Phil.*, pp. 443–446; Windelband, *Hist. Phil.*, p. 389; Eucken, *Problem of Human Life*, pp. 359–360; Rand, *Modern Classical Philosophers*, pp. 57–69, 80–84.

[1] See also the ideal States of Campanella and Bacon, p. 41.

and politics; but politics is only a part of his general mechanical system of the universe. He is the forerunner of modern materialism, and his peculiar theory of society is only an exemplification of this theory.

In passing from Bacon to Hobbes we come to a very different type of man. Bacon had risen to fame by his own genius, in spite of the hostility of his powerful relatives; Hobbes was a hard-headed man, with a narrow outlook, but with undoubted talents, which were fostered all his life under the patronage of the Devonshire family. Bacon was a practical politician; Hobbes was a doctrinaire and theoretical political writer. Of the voluminous literary remains of Bacon his philosophy forms but a small part; Hobbes had a general philosophical system, with which his classical and theological studies have connection.

In the succeeding chapter we shall review the philosophy of the rationalist, Descartes, who was a contemporary of Hobbes. We shall find that Descartes and Hobbes are alike in this: that both employed Galileo's mathematical theory as authoritative. They differed, however, in the way in which they used Galileo's theory. Descartes reduced mathematics to the rational, and conceived it to be the instrument of the reason; Hobbes reduced the rational to the mathematical, and conceived the reason as a form of mechanics. The starting-point of Descartes was the subjective, and he was held at a standstill until the relation of thought and mechanics was solved by him. The point of view of Hobbes was objective, and since all was mechanical, he discussed only incidentally the relation between thought and mechanical existence. Hobbes conceived the world in the

terms of only one series, the mechanical. Descartes' main motive was to preserve the rational; and, consequently, the world to him consisted of a double or dualistic series of terms. We therefore place Descartes, with Spinoza and Leibnitz, in a group called Rationalists. Hobbes was a materialist, and his greatness consisted in going the full length of materialism: he went beyond all the scientists of his time by extending the mechanical theory to the mental life.

The Life and Writings of Hobbes (1588–1679). The life of Hobbes falls into five natural periods. In his first and last periods he was the classical scholar. During his middle period of about thirteen years he was the philosopher. Furthermore, at one time he was absorbed in mathematics and at another in controversy. His period as mathematician was begun not until he was forty years old, and was preparatory to his creative philosophical period, which was begun when he was about fifty.

1. *As a Classical Scholar* (including his early years) (1588–1628) — the first forty years of his life. At Oxford (1603–1608); first journey abroad (1608–1612); beginning of his relations with the Devonshire family and also of his acquaintance with the "new science"; time of leisurely study (1612–1628) and acquaintance with Bacon, Herbert of Cherbury, and Ben Jonson; translation of *Thucydides* (1628).

2. *As Mathematician* (1628–1638). Second journey abroad (1629–1631) for eighteen months as tutor to the son of Sir Gervase Clifton; reads *Euclid* while abroad; third journey abroad (1634–1637), when he meets Galileo; begins to develop the conception of motion and sensation; by 1638 he is counted among the

notable philosophers and he meets the Parisian scientists, Mersenne and Gassendi.

3. *As Philosopher* (1638–1651). Plans his philosophy under title of *Elements of Philosophy: De Corpore*, *De Homine*, and *De Cive*, which is interrupted by the English Revolution; *Elements of Law* ("little treatise") written in 1640, read by a few in manuscript, published without his consent in 1650 in two parts: *Human Nature* and *De Corpore Politico;* flees to Paris (1640) and enters again the scientific circle at Paris; criticises Descartes' *Meditations; De Cive* published (1642), which is *De Corpore Politico* enlarged; acts for a time as tutor to Charles II in Paris; engages upon his general philosophical theory (1642–1645); *Liberty and Necessity*, written (1646), published (1654); *Leviathan* published (1651).

4. As Controversialist (1651–1668). Flees back to London (1651); *De Corpore*, published (1655); *Behemoth*, written (1668), proscribed and not published until after his death; controversies with Bramhall, Ward, Wallis, and Boyle; *De Homine*, published (1658).

5. As Classical Scholar (1668–1679). Translation of *Iliad* and *Odyssey* (1675).

In Molesworth's edition (1839–1845), Hobbes' Latin works occupy five volumes, the English eleven. The *Elements of Philosophy* — the *De Corpore*, *De Homine*, and *De Cive* — were not published in the sequence in which they were planned, but, on account of political exigencies, in the above order.

The Influences upon the Thought of Hobbes. 1. The premature birth of Hobbes had no inconsiderable influ-

ence upon his life. When his mother was carrying him, she had suffered a great fright, at the announcement of the approach of the Spanish Armada. Was it in consequence of this that Hobbes's life was a series of panics and controversies? He was extremely conservative in politics. He saw the new changes without sympathy with either party, and he had no political ideals — only fear. The time in which he lived reinforced this natural conservatism. When he was translating *Thucydides*, Buckingham was assassinated and the Petition of Rights was presented. Henry IV of France had been assassinated not many years before, and the Puritan element had become a disturbing factor in England. His study and his alliance with the Devonshire family confirmed him in his conservative position. All signs of the time pointed toward decentralization of government, toward war and rebellion. In fear he was "the first that fled" to France at the beginning of the troubles of Charles I; in fear he fled back to London eleven years later, lest the Roman Catholics, whom his *Leviathan* had offended, should murder him. Hobbes was again in great panic over the London fire and looked upon it as a divine penalty, on account of the impurity of the English court. Hobbes was always in fright lest he might not have peace.

2. The father of Hobbes was one of the unworthy clergymen of the English Established Church in the reign of Elizabeth. He was a dissolute man, and after many escapades he abandoned his family. In consequence of this Hobbes always had an antipathy toward the offices of the church and toward theology. Although he claimed to be a communicant, his allegiance was only nominal, as his theory will show.

3. Hobbes was very much influenced by the new mathematical science. His years at Oxford left little impression upon him, and he was but little interested in the scholasticism which was taught there. Yet his twenty years on the Continent brought him into the midst of the scientific circles of Italy and France. He was well along into maturity when he felt this influence. On his second journey, he read *Euclid* for the first time. He was then forty-three. On his third journey, he met Galileo and the French scientists, Mersenne and Gassendi, and it was then that he began his reflections concerning motion and sensation. The writings of Kepler, Descartes, and Galileo influenced him mightily. Although he acted as Bacon's secretary after the latter's fall, Bacon's influence upon him was little and has been overestimated. The mental powers of Bacon and his secretary were different, and Bacon knew nothing of the mathematical method. Hobbes shows to some degree the empirical tendency of his nationality, and he believed that knowledge must spring from experience. Further than this, the method that Bacon pursued does not appear in him. *The mission of Hobbes was to construct a mechanical view of the world.*

Of the three influences upon Hobbes, his inherited timidity is seen in his conservative political theory; the influence of his father is seen in his theory of religion; the influence of the "new" mathematical science is seen in his whole philosophy, especially in his psychology.

The Fundamental Principle in the Teaching of Hobbes. The assumption from which Hobbes deduced his entire philosophy was the mechanical conception of the physical world, — the characteristic philosophical

assumption of his age. Hobbes's contemporaries, both the natural scientists and the philosophers, had, however, on the whole, restricted the conception of mechanism to the physical world. Hobbes differed from them all in universalizing the conception. He extended its application from the physical over upon the mental realm, and thereby reduced the mental world to physics. He stated this mechanical principle in two parts: *all that exists is body; all that occurs is motion.* Hobbes applies this assumption to the physical world and it gives him materialism;[1] he applies it to knowledge and it gives him sensationalism;[2] he applies it to the will and it gives him determinism;[3] he applies it to morals and politics and it gives him naturalism.[4] Body is nature; body is everything. Body is the first term leading through man up to the State. With Hobbes, as with others of his time, the political field was the whole ground to be penetrated. The fundamental principle, by which Hobbes thought the whole field was to be explained, is body in motion. The mental world became drawn into the physical, and thereby his mechanical conception became the more natural.

There was one realm which Hobbes left untouched by his principle: the realm of the spirit, *i. e.* God, souls, angels. The science of bodies cannot deal with

[1] The theory that the assumption of extended, impenetrable, eternal, and moving bodies explains the universe.

[2] The theory that all knowledge originates in sensations; that all complex mental states (like memory, reason, etc.) are only combinations of elementary sensations.

[3] The theory that between alternative courses of conduct the choice decided upon is fully accounted for by psychological and other preconditions.

[4] The theory sometimes meaning materialism, sometimes positivism, but sometimes, as here, meaning that man in all his operations is a product of his environment.

the supernatural, for the supernatural does not consist of bodies in motion. Matter and mind are homogeneous; matter and spirit are not. The contrast in Hobbes is not between matter and mind, the material and the psychical, but between matter and spirit, the material and the supra-material.

The Method of Hobbes. Hobbes made the method of Galileo his own. He believed that all knowledge is rooted in mathematics. There is one true method of treating all subjects: the mathematical calculation of them as motions of bodies. Knowledge consists in using words as the signs of experience and in reckoning with them. Scientific thought is the combination of signs. It is the rationalizing of our experiences. Science has a truth in itself and stands as a rationally organized world, quite different from the world of experience which it has organized. The world of bodies in causally related motions is such an organized world, the most systematized and most simply constructed world that science can devise. But how does the scientist proceed? He begins with a phenomenon, which is a body in motion, and finds out the causes of the phenomenon, which causes are nothing more nor less than the elements of the phenomenon in question. Then the scientist proceeds from the causes to other phenomenal effects. These new effects are like the original phenomenon and its causes, — bodies in motion. Thus the world of the scientist is a world of causes and effects, for "the natural reason of man is busily flying up and down among the creatures, and bringing back a true report of their order, causes, and effects." Thus we find Hobbes to be a nominalist (see vol. i, p. 358) who, nevertheless, used the deductive method — rather

a strange combination. Like all his English successors, he employed induction and deduction, but the two processes never became fused.* Moreover for induction he has no method.

The order in which the writings of Hobbes appeared seems to have been the sport of outward events, for they were not written according to his original plan. On his return from his third journey to the Continent (1638), Hobbes, then fifty years old, had adopted the mechanical theory and had planned his philosophy. His comprehensive work was to be called the *Elements of Philosophy*, and was to be divided into three parts: *De Corpore*, treating physical bodies; *De Homine*, treating man as a psychological individual; *De Cive*, treating man as the citizen of a State. Hobbes's philosophy was therefore to be a universal philosophy, and he intended to bring his works out in logical order — first, the science of physics, then of human nature, and last of society. However, the growing disturbances in the political world at that time moved him to publish several treatises on politics first, and his physics and psychology more than fifteen years later.

The Kinds of Bodies. There are two kinds of bodies, natural and artificial. Natural bodies are those belonging to the physical world. The artificial bodies are the institutions of society, of which the most important is the State. Man belongs to both classes of bodies — he has a physical nature and he is a member of the State. Man is the connecting link between natural and artificial bodies. Philosophy is therefore divided into

* Read Falckenberg, *Hist. Mod. Phil.*, p. 72, for his quotation from Grimm's criticism of the irreconcilable contradiction of the empirical and the rational in Hobbes.

three parts: *physics*, which treats of purely natural bodies; *psychology*, which treats of man in his rôle as a natural individual; *politics*, which treats of man in social congregations with his fellows. Looking at the situation from the other end, political bodies are decomposable into men, men are in turn decomposable into physical bodies. Political bodies are dependent on the psychical nature of men, and the psychical nature of men is dependent on the nature of physical bodies, *i. e.* on bodies and their motions. Thus all bodies, natural and artificial, must be explained in terms of motion, if they are explained scientifically. Physical bodies are the first term leading up through man to the last term in the series, which is the State.

Hobbes's Application of the Mathematical Theory to Psychology. Although the prime interest of Hobbes lay in the political life of man, he nevertheless made an original contribution to psychology. He snatched the science of mental phenomena from the hands of the scholastic theologian and made it for the first time an independent science. Psychology had been based upon the assumptions of the theologian; for these Hobbes substituted the assumptions of the mathematician. Consciousness became in his hands not a soul, but the motion of bodies. It is described by him as "the movement of certain parts of the organic body." The states of consciousness, such as sensations, perceptions, etc., are brain movements or the refined movements of atoms in the nervous system. Memory and imagination are "decaying sensations"; thought is the sum of several sensations; experience is the totality of sensations bound together by the rigid laws of association. Hobbes was the father of what is known as the Associational Psy-

chology, or the theory that consciousness is composed of mental atoms under fixed laws of association.

But although Hobbes took psychology out of the hands of the theologian and made it a mechanical science, he did not identify it with physics. It is still psychology. The mental states are the physical motion of bodies, but they are not external motions, nor are they the copies of the external motions of bodies. Mental states are brain movements; they are the *result* of external motions. They come about in this way. A moving body in the outer world makes an impression on the sense organ, and this motion is transmitted by the nerves to the heart and brain. A reaction is effected in the brain, and this is a mental state. The brain transformations, and not the movement of the external object, is that of which we are conscious. The mental state is an "apparition" of the actual fact in the external world; it is an effect in a causal series. Our perception of light is, for example, a modification of the cerebral substance, and not of the external body itself. We deceive ourselves when we think that the sensations of light, sound, heat are outside us. These qualities of things are modifications of ourselves. There is nothing external to us, except the motions of bodies which are the causes of these modifications. The external world is no doubt real, but we have no knowledge of it — no knowledge of aught save the motions of bodies within ourselves. *This is the point of view of all subsequent English philosophy: the substance of things is quite different from our knowledge of them. The substance of things is real; but is not the object of our knowledge. The object of our knowledge is a modification of ourselves.*

The independence of knowledge with reference to theology on the one side, and to physical reality on the other, is well illustrated in Hobbes's discussion of language. Speech consists of words, which are only the counters of things. Words are markers by which men may know a thing as "seamen mark a rock." Science consists in their manipulation. Science combines them by addition and subtraction into judgments and syllogisms, and thereby constructs a body of demonstrated principles. Words are only counters, and he is a fool who mistakes the counter for the coin of reality. Words only represent reality, and the law of their use is mathematics. Truth and falsity are terms that are concerned with the correct or incorrect manipulation of these verbal counters and not with real things.

Hobbes's Application of the Mathematical Theory to Politics. In the same way that material bodies in motion give rise to mental states, and mental states as bodies in motion give rise to the human consciousness, so men as individuals are the source of the artificial body, — the State. In every individual man the impulse to self-preservation is innate, and is, in fact, his absolute and universal characteristic. Just as the law of the mechanical association of ideas is the fundamental principle of the human mind, so the mechanical law of self-preservation is the principle of man's ethical and political life. All our political institutions are the result of the striving of men for self-preservation. In his natural state — when, as Hobbes conceived, man lived without social organization — man had no other standard for conduct than his own self-interest; in the artificial political state, which man has constructed, self-interest is still his motive. Egoism is the sole working

principle of human beings both before and after they live in societies; but the political state is the most ingenious contrivance which egoism has hit upon for its own profit. Hobbes conceived that the original state of man, which under the name of "state of nature" was a common problem in the Renaissance, was a condition in which every man was making war against every other man. (Compare Locke and Rousseau.) But such a condition of things was obviously self-destructive. Consequently man arbitrarily and artificially formed the political State to avoid this self-destructive, internecine warfare. Under the circumstances it was the most effective way in which man could gain his personal ends, for the political State was the only possible means to peace. In the "state of nature" the right of every man to everything was the equivalent of the right of every man to nothing. So men made a compact with one another under which each relinquished a portion of his rights in order that each might have a portion of them secure. But what gives security to this compact? The sovereign to which the powers of the many have thus been delegated. What is the sovereign? It is the soul of the State, the general will, — represented by a single person in a monarchy, by an assembly in a republic. This sovereign, in whom the contract is vested, is absolute; for the sovereign was not a party to the original contract, since he did not then exist. The contract was made among the individuals, at that time in a "state of nature." So long as the State preserves its power among the people, the people must render their obedience to the State, — to the sovereign in whom the contract was vested. The might of the political State makes right. Whatever the State commands is right;

whatever is forbidden is wrong. There was no right and wrong in the "state of nature," only the possible and the impossible. An act is a crime when it breaks the contract, and thus the ground of morality is political legislation. Even the religion of the people is determined by the State. Any political State is better than a revolution. Here was philosophical justification of Charles I. A reversion to war is a reversion to the "state of nature."

When Hobbes was in France as a refugee he wrote the *Leviathan*, which contained this doctrine of political society. He presented a vellum-bound copy to Charles II, hoping to gain favor with that prince. However, the *Leviathan*, unfortunately for Hobbes's purpose, contained two paragraphs that antagonized the royalists and the Catholics. One was, that when a commonwealth is unable to protect its citizens in peace, that commonwealth is dissolved and a new sovereign commonwealth is formed. The second was, that while the sovereign state shall decide what the religion of its people shall be, no religion is infallible — neither Anglican, Catholic, nor Puritan. The religion that the sovereign makes legal is only a temporary one; the true religion will come not until the Last Judgment. The church is subordinate to the State, like everything else, and it does not matter much what the State religion shall be, provided there be peace. Religion is only a superstition resting on a defective knowledge of nature, and it is of little consequence what particular religion the State makes binding.

It hardly need be said that the *Leviathan* pleased neither Charles II nor the Catholics. The sequel of its publication was that Hobbes fled back to England from fear of assassination.

The Renaissance in England after Hobbes. The philosophies of Bacon and Hobbes do not exhaust, but merely represent the philosophy of England during the Renaissance. Empiricism [1] had to wait for Locke in the next period before it became dominant. After Hobbes Scholasticism was narrowly confined to limited circles and appeared under the form of Skepticism or of Platonism, neo-Platonism, or Mysticism. The reaction toward Platonism was centred in a group of ethical scholars, called the Cambridge School. It included Culverwell, Cudworth, Henry More, and Cumberland. This Platonic movement was short-lived. The scientific spirit, represented in the Renaissance by Bacon and Hobbes, dominated the next period, — the Enlightenment, — and we shall find it spreading its influence over France and Germany in the form that Locke gave to it.

But the history of the philosophy of the Renaissance is not yet completed. Contemporary with Bacon and Hobbes, there was a movement on the Continent which was more characteristic of the Renaissance, and indeed more important to it than the movement in England. This was the school of Rationalists, to which we now turn.

[1] Empiricism and Rationalism have reference to the source of truth. Empiricism is the theory that truth is to be found in immediate sense experience. The opposite theory is Rationalism, which declares that the reason is an independent source of knowledge, distinct from sensation, and having a higher authority.

CHAPTER V

THE RATIONALISM OF THE NATURAL SCIENCE PERIOD OF THE RENAISSANCE

The Nature of Rationalism. Although the new science grew apace, it was not altogether a safe vocation. Natural science involves metaphysical questions at every point. The scientist at this time, therefore, found himself often in delicate relations with the jealous church guardians. A scientific explanation of the universe might antagonize the church dogma concerning God, creation, and the final outcome of the world. The church doctrine concerning the soul, too, its nature and its immortality, its relation to the body, might be antagonized by physiological and psychological discussions. In such dilemmas as these the natural scientist was not successful in pretending to isolate himself entirely from theology and in assuming an attitude of aloofness to it. Galileo might declare that, whatever the results of his investigations in physics might be, they had nothing to do with the Bible; but he sorrowfully found that the Inquisition thought otherwise. Copernicus found that his astronomical theories came into conflict with church dogma, and he was tormented by his bishop. Kepler spent his later years in a deadly struggle with both Protestantism and Catholicism. Bacon and Hobbes lived in a country where their personal safety was fairly secure, nevertheless Bacon disguised his position by using large words and Hobbes was untroubled because he accepted the religion of his sovereign.

If the position of those was difficult who tried to keep themselves strictly within the limits of science, how much more fraught with personal danger was the position of those who openly constructed a new metaphysics? It would mean that a challenge was issued to the old Scholasticism by the same human reason that had already challenged and overthrown the old science. The group of men who did this were the Rationalists. The Rationalists were interested in science, but they were more interested in the metaphysical problems that science aroused. The human reason had been successful in the reconstruction of physics by the use of mathematics. Why should it not also be able to reconstruct metaphysics and set it, too, upon a mathematical basis? The leaders of this school were Descartes, Spinoza, Leibnitz, and the Occasionalists, — Malebranche and Geulincx. The Rationalists advanced a new conception not only of nature, but of God; new theories not only of the human body, but of the soul. Their task was the dangerous one of bravely invading the hitherto impregnable realms of the spirit.

The task of the Rationalists was rendered the more difficult because for the first time in the history of European thought, the inner and outer worlds had been completely sundered. For the first time do we meet with a clear-cut and positive dualism. The history of the growth of this dualism had been a long one, and to it the Greek Sophist, the Stoic, and the Christian had each contributed his share. However, Galileo and his fellow scientists in this period of the Renaissance had so reconstructed the old "world of nature" that it had become irreconcilable to the "world of grace." These scientists believed that nature must be made to explain itself;

its events must be conceived as necessitated; its processes as having the inevitableness of a machine. From the revolutions of the planets to the circulation of the blood, the movements of nature can be measured. The law of nature, that is conceived to underlie all this science, is mechanical causation. The researches of the scientists of the Renaissance had yielded a rich world of brute, inevitable, and scientific facts, and these stood in absolute fundamental contrast to the world of spiritual facts which were embodied in the church dogma. Apparently the problem of reconciling the "world of nature" and the "world of grace" had been solved by St. Thomas Aquinas in mediæval times. Now, however, the "world of nature" had been so reconstructed that the question was re-opened. How is the new "world of nature" to be brought into harmonious relation with that old, persistent, and settled dogma of the church? How can the newly conceived mechanism of nature be harmonized with the realm of free conscious spirits, without giving up the conception of God as a rational being, and also without depriving the soul of its power of initiation? The new science had therefore made it especially difficult on the one hand to reconcile a mechanical universe with an omnipotent God, and on the other to reconcile the mechanical human body with the free soul.

The struggle of the Renaissance with the Middle Ages is therefore concentrated in the development of the doctrine of this Rationalist School. It is studied here even better than by reading the two periods side by side. In Rationalism the Scholasticism of the Middle Ages and the Science of the Renaissance meet. Rationalism was a new science, but it was a new theology as well. It was a new scholastic philosophy; for, while the Rationalists

thought that they were giving the death blow to mediæval philosophy, they were instead only replacing it with another scholasticism. In their attempt, by means of the mechanical theory, to get an absolute system of knowledge upon which thought can rest, the Rationalists were acting in the spirit of the schoolmen. In fact, no schoolman ever showed more vigor or more dogmatic confidence in his philosophy. To the mathematical eye of the Rationalist there was absolutely nothing mysterious in the physical universe or in the spiritual realm. All things in heaven and earth could be made clear. The declaration of the Rationalists was the call of freedom, but it was as hazardous as it was ambitious; and the church with its assured revelations always stood opposed to the realization of freedom. So we shall find Descartes spending his whole life trying to trim his sails that he may not offend the Inquisition; Spinoza saving himself from both the Jews and the Christians by living in obscurity and publishing nothing; Leibnitz constructing philosophy with the avowed purpose of reconciling science and religion.

The Mental Conflict in Descartes. The strife between the spirit of the Middle Ages and that of the Renaissance appears in Descartes more strikingly than in any other thinker of this time. He shows, on the one hand, all the conservatism of a churchman of mediæval time in his respect for institutional authority; on the other hand, his intellectual activity places him among the leading scientists of the Renaissance. In no other thinker does the conflict between the Old and the New appear so unsettling; in none does the antagonism between the scholastic world of spiritual things and the mechanical world of science appear so irreconcilable.

He suffered a life-long mental strife, for within himself mediævalism and science were engaged in an unending dramatic struggle. The philosophy of Descartes was a compromise between his traditions and his scientific genius; and his philosophy never overcame his conflicting motives. The admirers of Descartes have called him the father of modern thought, and this is partly true. The father of the modern scientific method was Galileo. Descartes, on the other hand, pointed out the incontestable principle from which modern thought has proceeded; he won his place in the history of philosophy by attempting to harmonize the old scholasticism with the new science under this single principle.

The Life and Philosophical Writings of Descartes (1596–1650).*

(1) *As Child and Student* (1596–1613).

At home until he was eight years old (1596–1604).

At the Jesuit school at La Flèche until he was seventeen (1604–1613).

(2) *As Traveler* (1613–1628). Descartes studies "the book of the world."

At Paris (1613–1617), in retirement and study.

In Holland (1617–1619), nominally attached to the army of Maurice.

First Journey (1619–1621), going through Bavaria, Austria, north to the shores of the Baltic and back to Holland. The greater part of these two years were spent in Bohemia, enrolled in the army of the Emperor. He was on this journey when his mental crisis occurred,—

* Read Robertson, *Hobbes* (Blackwood Phil. Classics), p. 40; Rand, *Modern Classical Philosophers*, pp. 117–147; Eucken, *Problem of Human Life*, pp. 351–362; Calkins, *Persistent Problems*, pp. 459–463.

at Neuberg, in Austria, in 1619. It was then that he discovered either analytical geometry or the fundamental principle of his philosophy.

In Paris again, 1623.

Second Journey (1623–1625), to Switzerland and Italy, making a pilgrimage to the shrine of Loretto.

(3) *As Writer* (1629–1650).

In Holland (1629–1649). For the sake of absolute seclusion from inquisitive visitors, Descartes changed his residence in Holland twenty-four times and lived in thirteen places. All his correspondence passed through Mersenne. During these twenty years he made three journeys to France. Thus this period of absolute retirement became his period of literary production, chiefly between the years 1635 and 1644. He wrote his

Method (1635–1637).

Meditations (1629–1641).

Le Monde (1630–1632), published posthumously.

Principles (1641–1644).

Passions (1646–1649).

(4) *In Stockholm, Sweden* (1649–1650). The romantic side of the life of Descartes appears in his book on the *Passions*, which he wrote for the Princess Elizabeth, and also in his acceptance of the invitation of the Queen of Sweden to reside at her court and become her tutor. He died there from the rigors of the climate after a residence of one year.

The Two Conflicting Influences upon the Thought of Descartes. On the one hand, all the ties of inheritance, family influence, and early education allied Descartes with the spirit of the Middle Ages. A delicate constitution made him shrink from public controversy and the public eye. He even made a half apology for

his pursuit of science by saying that he was seeking to reform his own life, and that it was absurd for an individual to attempt to reform a state. His family on both sides belonged to the landed gentry, and he was therefore bound by caste to the support of institutional authority. He was educated in the Jesuit school of La Flèche, and this most conservative of ecclesiastical influences restrained him from following the logical conclusions of his own thought. He was therefore both physically timid and intellectually aloof. In 1632 he was about to publish *Le Monde*, which was a scientific description of the origin and nature of the universe, and agrees in part with the Copernican theory. It was a treatise which would naturally conflict with the teaching of the church. He learned of the trial of Galileo at Rome, and he never dared to publish the book.

The rival spirit speaking in Descartes was the new scientific spirit of the Renaissance. He had a genius for mathematics even when he was at school at La Flèche. On his going to Paris he became the centre of the most notable scientific circle in France — a circle composed of such men as the Abbé Claude Picot, the physician Villebressieux, the optician Ferrier, the mathematician Mersenne, and many other scientists and theologians. But he became dissatisfied and made some long journeys in order to study "the book of the world." His discovery of his method and his philosophical principle was the result. In mathematics he was the discoverer of analytical geometry and was the first to represent powers by exponents; in physics he stated the principle of the refraction of light in trigonometrical form; he explained the rainbow; he weighed the air. The same industrious application of the new scientific

methods that yielded great results in science, also resulted in his development of his philosophy. Love for original discovery made Descartes disdainful of all scientific authorities and even contemptuous of his notable contemporaries, Galileo and Harvey. He mentions by name Plato, Aristotle, Epicurus, Campanella, Telesio, and Bruno, but he claimed that he learned nothing from any one except Kepler. He felt himself to be above criticism, and in his self-arrogating dogmatism he is the type of the modern practical individualist. He defined truth as candor to one's self, and both in his practical life and in his theoretical ideal there is an entire absence of utilitarianism.

The Method of Descartes. Both science and scholasticism show themselves in the method of Descartes. He attempted to construct a philosophical method entirely in the scientific spirit of the Renaissance, but in the application of it he showed his scholastic training. Surfeited with inadequate and traditional methods he felt the need of some single principle by which all knowledge might be systematized, and he was sure that mathematics would furnish the key. Rational science was to Descartes only mathematics. Truth is to be found not in metaphysics, nor in empirical science. Descartes' philosophical aim was to establish a universal mathematics. Descartes was not entirely faithful to Galileo's mathematical principle in his employment of it, and his influence in metaphysics was thereby all the greater; for in the development of his method he found assistance in the traditional scholastic methods. Descartes was original in insisting upon finding the existence of an absolute and undeniable principle before any progress could be made. Such an absolute

principle can be obtained only by an *inductive sifting of all ideas.* From this all further truths must be obtained by *deduction.* Every true philosophy must therefore be an induction or analysis of ideas, and secondly, a deduction or synthesis. *The great contribution of Descartes was therefore this: to the inductive method of Bacon and the deductive method of Galileo, he added an absolute principle which must be taken as the basis of both induction and deduction.** ✓

Induction — Provisional Doubt — The Ultimate Certainty of Consciousness. The philosophical proclamation of Descartes was characteristically French, for he demanded the same return to an uncorrupted nature for the understanding that Rousseau many years later demanded for the heart. The first step of Descartes was also French in its demand for absolute clearness, which from his youth had shown him to be so passionately fond of mathematics. The way to such clearness is through provisional doubt. Let us purify the understanding by delivering it of the rubbish of traditional opinions, taken upon the say-so of others. By this negative induction of received knowledge, let us see if there is anything positive and certain. In Descartes's *Meditations,* in "a dramatic dialogue with himself," he portrays his own intellectual struggle to gain uncontaminated truth.

* Read Descartes, *Method, Meditations,* for the dramatic struggle of his inner life; Falckenberg, *Hist. Modern Phil.,* pp. 86–88; Fischer, *Descartes and his School,* p. 199; Blackwood Classics, *Descartes,* pp. 144–149; Windelband, *Hist. Phil.,* pp. 389 ff.; Höffding, *Hist. Modern Phil.,* pp. 219 ff.; Weber, *Hist. Phil.,* pp. 306 ff., for an opposing opinion about the place of Descartes.

He makes an induction of all kinds of knowledge and challenges each as it appears. Nothing is to be accepted as true until it has proved itself true. All facts are subjected to rigid scrutiny. Descartes doubts the testimony of the senses, the existence of the material world, the existence of God. But this induction is provisional, even if it is radical. While none of the usually accepted truths are found by him to be undeniable and absolute, yet Descartes has an ulterior purpose in challenging them. Greek skepticism had no further end than doubt, while at the other extreme Anselm and the orthodox scholastics had refused to doubt at all. The method of Descartes is contrasted both with that of Anselm and with that of the Skeptics, for he doubts in order that he may know. *Dubito ut intelligam.* Doubt is necessary, but only as a means to an end; and that end is knowledge. Descartes proclaimed for the modern individual the privilege and the duty of rationalizing his own beliefs.

In such an inductive sifting of traditional beliefs, are there any that can be called knowledge? Is there one whose reliability cannot be successfully doubted? Not a single one, except the thinking process itself. I am certain that I am conscious. Even when in my universal doubt I say that nothing is certain, I am at least certain that I doubt. I am, therefore, contradicting my universal skepticism. To doubt is to think; in doubting, consciousness is asserting its existence. Skepticism is self-contradictory. An induction of our ideas reveals at least this one absolutely certain principle: I, as thinking, am. *Cogito ergo sum.* My own existence is an intuitive truth that accompanies every state of mind. This is the best known portion of Descartes's philoso-

phy, and perhaps it is in part to the Latin formula of it that it owes its widespread acceptance. It is criticised as trifling, even if it be true; and as reasoning in a circle. Yet it must be remembered that Descartes does not intend the *ergo sum* ("therefore I am") to be a conclusion of a syllogism of which *Cogito* ("I think") is the minor premise. This formula is not an inference, but an intuition, which is revealed by induction as the certain background of all knowledge.

Three things are to be learned from this fundamental principle, said Descartes: (1) The first is that man has gained a criterion of truth. The characteristic of this principle that makes it reliable and certain is its clearness and distinctness. *Clearness and distinctness of ideas is the proof of their truth.* All true ideas will therefore have the mathematical and intuitive certainty that the idea of the existence of the self has. (2) The second lesson from this fundamental principle is that the existence of the soul is more certain than that of the body. The soul is more important and independent than the body. This is the subjective point of view of modern times. The modern man views the world as the representation or the creation of his thinking soul. (3) The third lesson from this principle concerns the nature of the soul. How long do you exist? As long as you think. (*Sum cogitans.*) True existence is rational thinking, and God alone has it. Feelings and passions are obscure ideas.

Deduction — The Implications of Consciousness. For Descartes reality lies within the Self; and the next question before him is how to get out of the Self. Knowledge that is confined to the Self and its states is called, technically, solipsism. Such knowledge amount

to little; indeed, it is not knowledge at all. Certainty of self-existence is the minimum amount of knowledge — merely the starting point of knowledge. Descartes proposes to escape from this solipsism by the use of logic. His method from this point on is ostensibly deductive, although he introduces by the side door other ideas than the idea of Self to make his proof complete. Descartes maintains that any idea will be as true as the consciousness that accompanies it, just as a proposition in geometry partakes of the truth of the axioms from which it is derived. Now my consciousness contains many ideas; some of them seem to be the product of my imagination; some seem to be adventitious; some are innate. It is upon the innate ideas that Descartes depends to get him out of his solipsism, for they are not created by the Self and they have the qualities of truth — a conscious clearness and distinctness. Among these innate ideas is the idea of God as a perfect being.

The Existence of God.* As a deduction from consciousness, the idea of God would prove to be a very useful one to Descartes, provided it had reality. For it is evident that consciousness can testify only to the existence of itself and its own states. How do I know the reality of anything else? Am I confined within the circle of my own thinking? Is all that I can say of this or that, "It is real to me"? Are all things only the phantasmagoria of my own brain, testifying only to the existence of myself? Descartes thought that the idea

* Read Falckenberg, *Hist. of Modern Phil.*, pp. 92–94; Blackwood's Classics, *Descartes*, pp. 151–153; Weber, *Hist. of Phil.*, p. 310; Calkins, *Persistent Problems in Philosophy*, pp. 25–30; Turner, *Hist. of Phil.*, pp. 451 f., which presents Descartes' arguments as reduced to two.

of God relieved him of this solipsism. If he could demonstrate God's existence, he would then be able to demonstrate the existence of the material universe. The problem was so highly important to Descartes that he threw it into several different arguments. The complications with which these arguments are filled must be passed over here, and the arguments stated in their simplest forms.

(*a*) Two are ontological arguments, that is, arguments from the character of the conception of God's nature.

(1) *A Simple Deduction.* If I have in my consciousness any idea as clear and distinct as my idea of Myself, it must have existence like Myself. My idea of God has just that clearness and distinctness; and therefore God exists.

(2) *The Geometrical Argument*, so called by Descartes. Some ideas have properties so immutable that, when we think the ideas, we necessarily think their properties. Such is the idea of a triangle; when I think of a triangle, I must think of it as having its three angles equal to two right angles. Such is also my idea of God; I must think of him as perfect and existing. He would not be God, *i. e.* a perfect Being, if He did not exist.

The reader will recognize this as a re-statement of the argument by St. Anselm. As such it raised a tempest of controversy in Descartes' time, and was attacked from all sides.

(*b*) Two are causal arguments, that is, based on the assumption of the equality of cause and effect. Only one of these arguments will be cited here. This is known as

The Cartesian Argument. I have an idea of a per-

fect Being. This idea must have an adequate cause. Therefore God must exist, for only He, and no imperfect being, can be the adequate cause of my idea of perfection.

The ontological arguments given by Descartes are evidently deductions from the certainty of self-consciousness. The question which we immediately raise concerning them is, Are they true? As to the causal arguments, Descartes is breaking away from his original assumption, viz., that self-consciousness is the only certainty, and is introducing another assumption, viz., the certainty of the law of cause. The question, then, that the thoughtful student asks, is, Does Descartes really escape from his solipsism?

The Reality of Matter. It will be seen that Descartes is trying to deduce from the certainty of the idea of self-consciousness the certainty of other ideas, as propositions are deduced in geometry from axioms. The existence of God is an implication of human consciousness. Now Descartes points out that the existence of matter is implied in the existence of God. Descartes is interested in material science, and it is important for him to prove the reality of matter. Here again his scholastic training comes into play. Since God has all the attributes of a perfect being, He must be veracious. If there were no God, but only a deceiving Devil, the external world might be only a fiction, created to deceive us. But God exists, and we can trust that He would not continually deceive men about the existence of nature. An atheist could have no science, but to Descartes,

> God 's in His heaven —
> All 's right with the world.

Of course, man is constantly in error about the character of physical things, but these errors arise from his misinterpretation of them. Nature in some form lies before man, or else God in His truthfulness does not exist. The essence of matter is extension (see below), and whatever my interpretation of it, something extended lies before me to be interpreted.

This is the skeleton upon which Descartes constructs his theory. Even this cursory examination of it shows the obvious attempt to explain "the world of grace" by the method of mathematics, and it is quite consistent with the spirit of the Renaissance. The existence of God and the existence of matter are deduced in turn from the axiom of all thought, the Self; while matter is further described as the extended or the measurable. Thus Descartes has tried to construct a bridge between the scholastic concepts and the science of the Renaissance. The three realities, the Self, God, and matter, which Descartes often speaks of as intuitively certain, have obviously a differing cogency. The reality of consciousness is the ground from which the other two are derived. In asserting its primacy, he is voicing the spirit of the Renaissance even more clearly than did Galileo and Bacon. For Descartes in this has gone back of the objective facts to a single subjective principle; whereas the deductive principles of Galileo were objective. In this respect Descartes is the founder of the subjective method of modern thought, and in identifying the Self as the reason he became the founder of rationalism. In any case he established a background for epistemology, or the theory of knowledge. But in his derivation of the other two realities — God and matter — he shows how persistent was the scholastic current in his thought.

Although he declared them to be intuitively known, they evidently are not so in the same sense that self-consciousness is; and he felt obliged to support them by traditional scholastic arguments.

God and the World. Leaving these fundamental principles of Descartes, we now come to a consideration of a few of the details of his philosophy. Descartes' world is a dualism in which conscious being stands in contrast with space objects. God is related to the world of mind on the one hand and to the world of matter on the other. The order in which Descartes came upon the three substances — the Self, God, and matter — is, however, not the order of their reality. In reality God is the *primary substance*, for He depends only upon Himself. Matter and the Self are *relative or created substances*, for they depend upon God. Matter and mind have different modes of appearing: the modes of matter are form, size, position, and motion. The modes of mind are ideas, judgments, and will. Thus mind is so essentially different from matter, as can be seen in their respective modes, that God stands in a different relation to each.

The Relation of God to Matter. Descartes here investigates the realm in which he has the deepest interest; but he makes a concession at the very beginning. He divests things of their qualities and finds the essence of matter to be extension. Qualities are not resident in things, but are the result of our sensations. Sense-perception is knowledge of qualities, and therefore obscure knowledge; while clear or intellectual knowledge is of quantities. But there is one quality common to matter, — extension. Space, extension, and matter are the same. There is no space that is empty, no

matter that is not extended. An extended or material body has, however, in itself no principle of motion. It cannot move itself. It must be moved by an external cause, and the whole universe must be a mechanism whose movements have their first cause in God. Matter in its modes of motion and rest has God as its first cause or unmoved mover; and under matter is included everything extended, — inanimate objects, the lower animals, and the bodies of men. To this world of matter God stands in the relation of an inventor to his machine.

The Relation of God to Minds. The essential nature of minds is thought. Mind is therefore different from matter because it is unextended and free. The two relative substances have nothing in common except that they are related to God. The relation of God to minds is, however, very different from His relation to matter. God is not the unmoved mover of minds, but He is the perfect and infinite mind to which our finite minds turn as their ideal. God thinks and wills perfectly what we think and will imperfectly. He is not the mechanical but the teleological cause of minds, their *ens perfectissimum*, the goal of all mental aspiration.

The Relation of Mind and Body. In proportion as Descartes clearly defined mind and body, and referred each back to its own principle, the impossibility of connecting the two became apparent. Descartes intended that his theory should, above everything else, clear philosophy of all obscurities. So he divided the world into two relative substances, — mind and matter, — each operating in its own realm, each exclusive of the other. The intention of Descartes is to be a consistent dualist. But there was one point where, with one eye on the church, he had to qualify for ethical considerations his

scientific principle of matter. That is the point where the human body acts upon the soul and the soul acts upon the body.

There was little trouble for Descartes in conceiving the movements of inanimate bodies, plants, and all the lower animals as purely mechanical and automatic, with their first cause in God. From his own investigations he felt obliged to regard many of the human functions as automatic also. But his ethical and theological interests compelled him to think of man as exalted above the rest of creation. Theology has always been in a sense aristocratic, and has drawn a line between man and other things. Man alone has a soul in his body. The soul of man is immortal and free, and must therefore have control over the body; nevertheless the soul of man must be conscious of the impressions that come through the body. Here the science of the Renaissance and the scholasticism of the Middle Ages refuse to be reconciled in the philosophy of Descartes. When it became a question between Descartes' scientific theory of matter operating itself mechanically and the church doctrine of a spiritual will operating the matter of the human body, the scientific theory had to yield. How does Descartes yield gracefully to the theological requirements and bring together the two unlike worlds of matter and mind in the human personality?

Descartes' explanation of the relation of human mind and body reminds us of the mythical explanations of Paracelsus. The soul is united to all parts of the body, but its point of contact with the body is the pineal gland, and this contact is made possible through the animal spirits (*spiritus animales*) or the fire atoms in the blood, a revived Greek conception. The pineal gland

is a ganglion in the centre of the brain, which biologists tell us is a defunct eye, but which Descartes conceived to be the seat of the soul. Descartes maintained that the animal spirits, having been distilled by the heart, ascend by mechanical laws from the heart to the brain, and then descend to the nerves and muscles. When they pass through the pineal gland, they come in contact with the soul. The soul exercises influence on the body by slightly moving the gland and diverting the animal spirits. In this way the emotions and sensations are to be explained. The movement of the pineal gland by the animal spirits causes sensations in the soul; the movement of the gland by the soul changes the movement of the animal spirits, and is an exhibition of free action. But this does not add to or subtract from the energy. It merely changes the direction of energy.

The Influence of Descartes. Although the philosophy of Descartes was forbidden in the University of Oxford, was proscribed by the Calvinists in Holland, and his works were placed upon the Index by the Catholics, it created a profound impression on the theology, science, and literature of the seventeenth century. It spread over Europe in a somewhat similar way to the Darwinian evolution theory in modern times. Its success was immense, many standard men rallied to its support, and everything before Descartes was considered to be antiquated. Among philosophers his doctrine had an internal development in a natural way along the lines of the problems which he had left unsolved. A philosophical development, the source of which can be traced directly back to Descartes, went on until Kant published his *Critique* in 1781. This has later been called the School of Rationalism in Germany, France, and Holland. The

most important members of this school — the Occasionalists, Spinoza, Leibnitz, and Wolff — we shall consider in their place. Descartes had an important immediate following in the group, who go by the name of Occasionalists; but his most important successor, who can hardly be called his disciple, was Spinoza.

Descartes' method had a peculiar fate. His followers misunderstood it, exactly reversed it, and obtained very fruitful results. Descartes himself had hoped to see induction employed in most metaphysical problems. He regarded deduction as of use only in proceeding from one self-evident fact to another. But the following Rationalists used the deductive method entirely and tried to systematize ethics after the manner of Euclid. They deduced their systems from some assumed principle. This tendency was first seen in the Port Royal logic, and was completed by Spinoza.

The Relation of the Occasionalists and Spinoza to Descartes. The development of the doctrines of the Occasionalists and Spinoza from Descartes was an attempt to make clear the conception of *substance*. Since substance was the most important scholastic category, it is easy to see why Spinoza's teaching became thoroughly scholastic. Descartes had used the term "substance" in a very loose way to apply to God as infinite, and to minds and bodies as finite. He speaks of God as the only substance, and yet of consciousness and bodies as created substances. Such ambiguity must be overcome, if a philosophy which prided itself on making everything "clear and distinct" was to stand. Descartes had fallen short of justifying his attempt to put metaphysics completely upon a mathematical basis, although this had been his original problem. The obscurity of the spiritual

world still remained, because Descartes had left the concept of the spiritual substance undefined. The world of the spirit was still an unknown country. The spiritual substance had not been made clear and distinct, and there still remained the ontological problem of the relation between mind and matter, and the psychological problem of the relation between the individual soul and its body.

Descartes had, however, defined clearly the concept of the substance of matter — the substance with which the natural scientist works. He had accomplished this, to be sure, by destroying the essential distinctions between material things. A "thing" is essentially a substance in which many qualities inhere, *e. g.* a piece of sugar having whiteness, sweetness, etc. Material substances were alike in that all were essentially extension. All else besides extension in any particular finite thing was a modification of extension. A lump of sugar was essentially the same as a lump of salt in that both were extension; the saltness, sweetness, etc., were secondary. Now this makes the nature of bodies very clear; and Descartes proposed to reduce the substance of the states of mind to the same clearness, but he did not do it. He was interested in natural science and he developed his rationalism only with reference to matter. Bodies are parts of space or corpuscles, which are mathematically infinitely divisible, but perceptually are not further divisible. As far as he went, Descartes was clear enough.

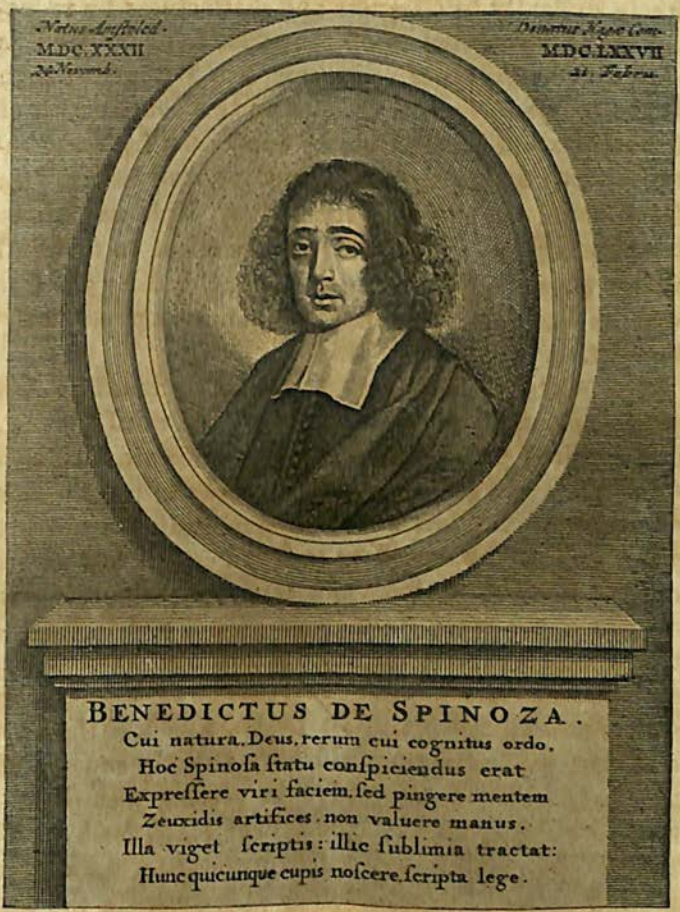
The Occasionalists and Spinoza represent the second stage in the development of Rationalism. Both tried by making clear the meaning of spiritual substance to define the relationship of God to the material world. Both tried to state the problem in other words, to over-

come the dualism between mind and matter, and to reconstruct the old "world of grace" so that it would be consistent with the new world of science. The Occasionalists, whose chief exponents were Malebranche and Geulincx, we shall dismiss with only a few words, while considerable attention must be given to the teaching of Spinoza. Malebranche tried to do for the mental world what Descartes had done for the world of matter. Since no knowledge is possible except in God, he claimed that the modes of finite minds — our ideas, judgments, imaginations — are alike in essence in being modifications of the universal reason of God. God is so far the "place of minds" as space is the place of bodies. All our ideas participate in God's reason, and all our volitions are the modifications of the will of the Divine, just as bodies are modifications of extension. What then is the relation, asked Geulincx, between bodily movement and the states of consciousness? Why does my arm move when I wish to move it? By the mediatory power of God. The thought in my mind is the "occasional cause" of the movement of my arm, while God is the true cause of the movement. The movement of the human body is therefore, like the movement of all matter, a continuous miracle caused by an ever watchful Deity, who keeps body and mind in harmony. Spinoza completed his pantheism before Malebranche had prepared the way. He formulated a complete doctrine of substance, conceiving material bodies to be essentially the same in being modes of extension, and mental phenomena to be essentially alike in being modes of thought. But more important was his further teaching that on that account the two series have no relation to each other. That is to say, Spinoza reduced the

whole difficulty to clearness and distinctness by reducing the three substances of Descartes to one. For this reason Spinoza was a more complete Rationalist than Descartes and he was assisted in this construction of a mathematical Rationalism by two facts: he held himself strictly to the deductive method, and he was free from social and ecclesiastical ties. Spinoza is the truest utterance of his time in its effort to make all things clear; and this is not contradicted by the fact that he had little influence in shaping contemporary thought.

The Historical Place of Spinoza.* Spinoza did not get full standing nor was he widely read, until Lessing, one hundred years later, resurrected his teaching and Goethe adopted it. He produced what the Renaissance was striving for, but what the Renaissance could not yet grasp, — the complete logical formulation of its deepest thought. Spinoza produced the only great conception of the world during this period, and it excited the hostility of contemporary Catholics, Protestants, and free-thinkers alike. The product of his thinking was a new systematic scholasticism, which, if the time had been ready for it, would have entirely superseded the mediæval. He succeeded in placing metaphysics upon a scientific and mathematical basis, for his philosophy was not only logical in its content but mathematical in its form. Spinoza's philosophy is the Renaissance expression of mediæval scholasticism, — the expression of that rationalism that underlies both the

* Read Royce, *Spirit of Modern Phil.*, chap. iii; Baldwin, *Fragments in Philosophy*, pp. 24–42; Rand, *Modern Classical Philosophers*, pp. 103–166; Eucken, *Problem of Human Life*, pp. 362–3


Natus Amstelod.
MDC.XXXII
Obiit Hagae Com.
MDC.LXXVII
BENEDICTUS DE SPINOZA.
Cui natura, Deus, rerum cui cognitus ordo,
Hoc Spinoſa ſtatu conſpiciendus erat
Expreſſere viri faciem, ſed pingere mentem
Zeuxidis artifices non valuere manus.
Illa viget ſcriptis: illic ſublimia tractat:
Hunc quicunque cupis noſcere, ſcripta lege.

BARUCH DE SPINOZA

(Pollock (*Spinoza, His Life and Philosophy*, p. xxvi) says that only three of the portraits of Spinoza may reasonably be considered authentic. One is a miniature of the philosopher in the Summer Palace at the Hague: the second is a painting in the Town Museum at the Hague: the third is the one given here, which is an engraving found in copies of the original edition of Spinoza's Posthumous Works (1677). This portrait seems to be somewhat idealized, but of the three it is the most artistic and lifelike.)

thought of the Middle Ages and the Renaissance. It is as if Thomas Aquinas had been transported into the Renaissance, and finding that science would not support and explain dogma, had conformed dogma systematically to the new science. Mathematically science was the new dogma. Spinoza is the last word of mediævalism, although his language is the science of the Renaissance. The utterance of Spinoza sounds strange because, while his thought is mediæval, his expression and form are scientific.

Spinozism had a revival in the eighteenth century.* It formed the background of the philosophy of Herder and that of the author of the *Wolffenbüttel Fragments*. The connection of Lessing and Spinoza was a matter of active controversy at that time. Spinoza was the great influence upon Goethe. In the nineteenth century in England Coleridge reproduced from Spinoza's *Ethics* the doctrine of an all-pervading love and reason.

Spinoza strove before everything else for a unitary system, and yet it is interesting to see how much he has been honored from different quarters. Artists, religious devotees, poets, idealists, materialists, and scientists have found in him their truest expression. This is not only because each has found something different, but because his philosophy had actually a many-sided character. His teaching had the advantage of being thoroughly radical. Bad systems of philosophy are impossible, because they are contradictory. While no one knows that any system corresponds to fact, still it is possible that a radical system may have such correspond-

* See page 279. Read Goethe, *Geheimnisse*, in this connection.

ence. Spinoza's system is comprehensive, and therefore has struck sympathetic chords in differing thinkers.

The Influences upon Spinoza. 1. His Jewish Training. Spinoza was born a Jew and remained a member of the Synagogue until he was excommunicated at the age of twenty-four. Although he was the original genius who transcends his limitations, his young mind was moulded after the Jewish type. He received the strictly religious training of the Jewish boy in the Jewish academy at Amsterdam, where he learned a trade in connection with his studies. He studied the Talmud, mediæval Jewish philosophy, especially the writings of Maimonides (twelfth century), and the Cabalistic literature. In a Jewish curriculum the classical languages had no place; and mathematics, except arithmetic, was generally overlooked. His early instruction emphasized above everything else the unity and the supremely transcendent, theistic character of God.

However, his separation from the Synagogue at this early age could not but modify his theology. It made him a free Jew. He was no longer under the restraints of Jewish traditions. While he never abandoned his belief in God as a unity, he gave up his belief in the transcendent theistic God of the Hebrew prophets; and he differed from the contemporary Jewish Cabalistic teaching of emanations from God. He seems to have so modified the orthodox Hebrew conception of God that it rather resembles that of the mediæval mystic Christian. Perhaps the influence of Bruno upon his thought may account for its final shape.

2. His Impulse from the New Science — Descartes' Influence. The "free thinking" for which Spinoza was excommunicated by the Synagogue was obtained first

from his instruction in the school of Van der Ende, a physician of daring naturalistic tendencies. This was when he was eighteen. Spinoza had already learned Italian and French; Spanish, Portuguese, Dutch, and Hebrew were his native tongues; Van der Ende taught him German and Latin, and introduced him to the science of the time. It was then that he read Descartes, whose philosophy he made the basis of his own. Spinoza was not an inventive genius like Descartes and Leibnitz, but he was more rigidly systematic than either. He was by nature a thinker who was obliged to carry his thought through to its logical conclusions. He had already, at this early age of eighteen, begun to make independent theological excursions. Consequently the mathematical methods of Descartes furnished him a method, and Van der Ende gave him the encouragement for carrying out his independent thinking unrelentingly to its logical end. To state his modified Jewish conception of God in mathematical terms became his task, and his success in thus stating it, with Descartes as a starting point, made him the most complete representative of Rationalism.

3. **His Acquaintance with the Collegiants.** After his expulsion from his kindred, he lived for seven years with a sect of Baptist Quakers called Collegiants. This was a dissenting religious body without priests or set forms of worship. The members were simple, pious people, who regarded moral living as superior to creed; and Spinoza's life in their midst must have determined to some degree the lines of his thought. To a man of Spinoza's simplicity of mind and kindly disposition, the Collegiants would prove to be not only congenial companions in his hours of distress, but they would confirm

his own love for the ethical as an ideal. Spinoza says that the motive of his philosophy is a practical one; that he is seeking that which would "enable me to enjoy continuous and supreme and unending happiness." He is seeking a theory of life that would aid in allaying the unrest of his time; and he is the only philosopher who has called his metaphysics *Ethics*. The humaneness of his doctrine, the practical purpose of his writings, and the ethical ideal that informed his whole life had at least their reinforcement, and perhaps their origin, in his contact with the Collegiants during this critical period. His life with this sect influenced him in his refusal to accept the chair of philosophy at the University of Heidelberg, and to remain content to be the obscure grinder of optical lenses.

The Life and Philosophical Writings of Spinoza * (1632–1677). The history of philosophy presents in the person of Spinoza a lovable, interesting, and striking character, as well as the author of one of the profoundest of philosophical systems. His life was one of social isolation and retirement rather than of solitude. The Jews to whom he belonged lived a kind of double exile — they were exiled from their home in Spain, and they lived by themselves apart from the people of Amsterdam. When Spinoza was excommunicated by his brethren, he suffered, therefore, a threefold exile. Moreover, Spinoza was not only excommunicated by his people, but he was hated by the contemporary Catholics, Protestants, and the prevailing Cartesian school. Even the free-thinker, Hume, spoke of him as "the infamous Spinoza," and another philosopher described his philosophy as "the hideous hypothesis of Spinoza." But his isolation was

* Read Auerbach, *Spinoza*, an historical romance.

far from solitude, and he had many eminent and faithful friends and a notable correspondence. Of his short life of forty-five years, he spent twenty-four, or more than half, as a member of the Jewish synagogue. During the next seven years he found refuge among the Collegiants. In the last fourteen years of his life he became widely known, mainly through the *Theological-Political Tract*, published in 1670, the only one of his writings which he himself published. This brought him the call to the University of Heidelberg, which he declined. His life may be conveniently divided into three periods, as follows: —

1. *In Israel* (1632–1656). Spinoza was educated at the Jewish academy at Amsterdam, where he studied theology and learned a trade, according to the Jewish custom. This trade was the grinding of optical lenses; that is, he became an optician, and this required some knowledge of mathematics and physics. During these years he got instruction from Van der Ende in science and Latin. He also read Descartes and learned many languages. He wrote a compendium of a Hebrew Grammar, of which the date is doubtful. In 1656 he was excommunicated by the synagogue. The charges brought against him were that: (1) he denied that the Old Testament taught the doctrine of immortality; (2) he affirmed that angels may be only phantoms or ideas in men's minds; (3) he affirmed that God may have a body.

2. *In Retirement* (1656–1663). Spinoza spent this time with the Collegiants, and this was his most fruitful intellectual period. He brought his ontology, ethics, politics, and physics into a unified system; and he formulated his theory of determinism and his mathematical

method. In 1658–1661 he was writing his so-called *Short Treatise*, "concerning God, man and his well-being." This was the first draft of his *Ethics*. In 1656–1662 he was writing his *Improvement of the Understanding*. In 1662–1663 he wrote a summary of the principles of Descartes.

3. *In the Public Eye* (1663–1677). During this period Spinoza lived at or near the Hague, where he had many visitors and a large correspondence.* He was an intimate friend of the brothers DeWitte, who made so large a part of the political history of the country. In 1662–1665 he was writing his *Ethics*, his monumental work. In 1663–1670 he wrote and published the *Theological-Political Treatise*, the only work published during his life. Although received with horror, it was widely read. It aimed to show that the *Bible* is history. In 1673 he declined the call to the University of Heidelberg. Just before his death, in 1677, he wrote the fragment of the *Political Treatise*.

The Method of Spinoza. The method which Spinoza employed in writing his *Ethics* must not be regarded by the reader as a fantastic dress that he capriciously chose. It had for Spinoza a real and not merely an external significance. On taking up the book, one finds philosophy treated exactly as Euclid treated his geometry. Beginning with a number of definitions and axioms, there are deduced, step by step, propositions with appended scholia and corollaries. To Spinoza this was not pressing philosophy into an artificial and rigid form, but was only the natural mode of philosophical expression. For, in the first place, if the new method of science had proved

* Read *Bohn's Libraries, Spinoza*, vol. ii, pp. 275 ff., for Spinoza's interesting correspondence with notable men.

itself successful in treating physical phenomena, why should not the same method have the same success with problems of the world of the spirit — and in this way bring the two worlds into harmony? By deduction one could then arrive at absolute certainty and unassailable proof of the solutions of metaphysical problems that had long vexed the Middle Ages. With the perfect geometrical method all problems in heaven and earth could be solved. In the second place, the religious conviction of Spinoza that all things come from God required the deductive method to explain them. The order in which we should study phenomena should correspond to the real order in which they stand to God. God is the ground or reason of things, and all are derived from Him as consequents. The deduction of the relation of finite things to God will correspond to the real relation in which God stands to them.

The Fundamental Principle in Spinoza's Philosophy. The philosophy of Spinoza seems to be Cartesian in every respect except one; and that one difference was like the leaven in the lump — it transformed his philosophy into a radically different one from that of Descartes. Spinoza's point of departure was the philosophy of Descartes, all his presuppositions are the fundamental principles of Descartes, and the structure of his system seems to be that of Descartes. He has the same respect for the power of the reason to know all truth, the same faith in the omnipotence of the mathematical method, the same general conception of substance, the same idea of the qualitative difference between the worlds of thought and extension, the same belief in the mechanical structure of the world of nature. He made these his own and accentuated them. But he

added to these a new and transforming principle: he conceived that the substance, God, is not merely one object of knowledge, but *He is the only object of knowledge.* He is the only substance, and finite things are only modifications of Him. Finite things are alike at bottom, and to know them truly is to know God.

This new principle transforms all the Cartesian elements in Spinoza's teaching. It changes the Cartesian theism into a pantheism; it supplants Descartes' theological orthodoxy with a naturalism and Descartes' doctrine of freedom with a determinism; and it turns the cultured aloofness of Descartes into a benevolent mysticism. This new principle becomes "the head of the corner." The oneness and universality of God is the single proposition from which Spinoza deduced his whole philosophy. God is the ultimate ground whose existence must be real, because it is conceived. The intrinsic scholasticism of the philosophy of Spinoza appears in his definition of substance, for it is only a condensed statement of St. Anselm's argument for the existence of God. Spinoza says, "By substance I mean that which is in itself and conceived through itself alone." There are, therefore, two kinds of things: the thing that has existence in itself and the things that have existence in something else. God stands alone in the first class; all other things make up the second class. Spinoza's world is divided into two parts: God and the modes of God. God is self-explanatory and self-existent, while everything else is explained through Him. The only object of knowledge and the single presupposition of existence is God. In a phrase that has become classic, Novalis described Spinoza as a "God-intoxicated man."

Three Central Problems in Spinoza's Teaching. We have already noted that Spinoza was the chief exponent of "clearness and distinctness" in this epoch when all mysteries were to be revealed. He sought to articulate a metaphysics that would spread out the plan of the world like a demonstration in geometry. His definition of substance is perfectly intelligible; he accepted the mathematical analysis of the material world into a world of extension, and that of the world of conscious states into one of thought — all this for the sake of simplification and clearness. How simple such a philosophy at the first blush appears — the world is God and his modifications. As a matter of fact it is one of the many examples of the irony of history that the philosophy of Spinoza is one of the most difficult to interpret. Its difficulties do not arise from its having a novel point of view, for on the contrary it is one that appeals strongly to the popular imagination. Its difficulties arise from its very simplicity, for, after all, human life is so rich and varied that a simple formula will hardly express it. From beginning to end Spinoza's thought has a vagueness for which the beginner in vain strives to find the cause. The cause lies in the seemingly simple principle that God is all that really exists, and yet the world consists of God and other things.

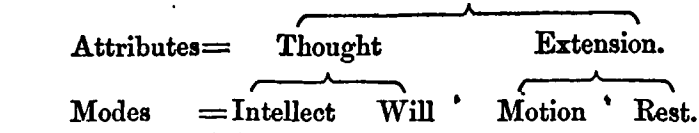
From Spinoza's effort to simplify matters emerged three central problems: (1) The problem of the all-inclusiveness of God — the problem of pantheism; (2) The problem of the unity of God — the problem of mysticism; (3) The problem of the salvation of man — an ethical problem. We shall now consider these problems in order.

The Pantheism of Spinoza — The All-Inclusiveness of God. That Spinoza's philosophy is a pantheism appears at the outset in his conception of substance; for the substance is all that really is. Descartes had conceived of three substances, — God as the absolute substance, and mind and matter as the two relative substances. But to Spinoza there can be only one substance; for if there were two or more, no one would be substance, since each would be conceived through the others. If we think at all, we must think of substance as all-inclusive. One might suppose that this preliminary statement would be all that Spinoza could say about life: all that really is, is substance; other things do not exist. But that would be a misinterpretation of Spinoza. He does not mean that finite things are mere nothings. They exist as unrealities; they exist as negations of the substance. If you prick into the finite world, it does not collapse, like a balloon. It still exists as an unreality.

No person ever had the idea of infinity so profoundly as did Spinoza. His idea of infinity is not merely that of the infinity of time and space, which indeed affords a tremendous variety of possible constructions, since space and time are each infinite. To Spinoza the infinity of the substance is much more than these possible combinations of time and space, for corresponding to the time and space series is a series of mental states. Every event has a reason. Every one of the infinity of events in the world of extension is paralleled by some state of thought. But this is by no means the whole story about Spinoza's conception of infinity. Besides the infinite world of time and space and the infinite world of corresponding thought, the substance has

Spinoza possesses an infinity of other attributes, each of which is infinite. Spinoza piles up infinities upon infinities, and thus conceives the substance as an infinity in an overwhelming sense. Only two of the infinite modes appear to our limited human discernment: the infinity of the mode of extension, and the infinity of the mode of thought.

Spinoza begins at once to tell us about the forms in which the all-inclusive God appears to us. First, the substance has two attributes, thought and extension. An attribute is "that which the intellect perceives as constituting the essence of the substance." Each attribute in its turn manifests itself in modes: thought appears in the modes of intellect and will, extension in the modes of rest and motion.



This bare skeleton of our rich and varied world appears very much the same as that which one might find beneath Descartes' philosophy. However, Spinoza's conception of substance transforms it into a framework of a very different kind of philosophy. Since God is the inclusive reality of it all, we have here a pantheism instead of a dualism. The antithesis which in Descartes' philosophy was between extension and thought, now in Spinoza's teaching is between God and other things.

What is the place of the attributes and modes in the all-embracing and real substance? As to the attributes, Spinoza maintained that we, as finite beings, do not

know God in His character as substance, but that He always appears to us through His attributes of thought and extension. There are only these two attributes that the human mind can know, although God as an infinite being must possess an infinite number of such attributes. In our human world all things are either thought-things or extension-things. Each of these two attributes is infinite after its kind. Each fully expresses an aspect of God without depreciating the value of the other. Each is fully adequate, just as a table may be both white and hard without either quality infringing upon the other. The attributes are the substance made more concrete. The modes are in turn modifications of the attributes and more concrete expressions of them and of the substance. Each mode is infinite after its kind. Since God exists only in reality, He would not supposably see from His point of view the world laid out in attributes and modes; for these are only human ways of interpreting Him. While the critics agree that the modes are human interpretations of the attributes and therefore unreal, they disagree about the relation of the attributes to God. Some maintain that the attributes are merely human ways of seeing the substance, analogously to the modes — as if we saw God now as thought and now as extension; others maintain that God is nothing other than the sum of the attributes; of extension, thought, and the unknown, infinite, other attributes. The difficulty lays bare the nerve of the problem of pantheism, and probably Spinoza was not clear in his own mind about the relation of the attributes to the substance.

Spinoza speaks more definitely upon this same problem of the relation of the modes to God. Is God the

sum-total of all existent things, or is He the principle behind them? Spinoza says that God is both. God is the cause of the world, not cause in the way that the term is commonly used nor in the sense that Descartes used it. God is not to existent things the first cause or the unmoved mover of matter, or the teleological cause of thought, as in Descartes. He is cause in the sense that a triangle is the cause of its own three sides. He is the rational ground (*ratio essendi*) or the logical reason for the being of things. In this sense God may be regarded as the cause *both* in the sense that He is the sum-total of existent things or modes (*natura naturata*), and in the sense that He is the immanent and energizing principle of existent things (*natura naturans*). These conceptions as well as their phrases Spinoza probably got from Bruno.

The world is, therefore, related to God in that it follows directly from the nature of God; God is related to the world in that He is the logical ground of the world. Is God the creator of the world? No, He is the world. Is God a person? Is He a self-conscious being like ourselves, — an individual? No. The thought-aspect of God includes our thought, but it is the very different infinite thought; the extension-aspect of God includes our body, but it is the very different infinite body. God has soul and body and an infinite number of other aspects. *God is* — an unchanging, self-dependent being, whose modifications are necessarily determined in their relation to Him and to one another. Spinoza conceived the character of God exactly from the nature of geometry. Just as all geometrical conclusions follow from the nature of space and exist in determined and fixed relations to one another, so every-

thing finite follows from the nature of the Infinite, and each finite thing is in a rigid chain of finite things of its own kind — a chain without beginning or end. The necessity of the divine nature appears in all, not as a series of emanations from God, but in a series, each member of which is determined equally by Him.

The Mysticism of Spinoza. *From the point of view of man*, mysticism in speculative or religious thought has reference to the immediate apprehension of God. Mysticism frequently accompanies pantheism, and *from the point of view of God* refers to the oneness of His all-inclusive nature. Spinoza's pantheism is also a mysticism which involves the immediate apprehension of the divine by the human; it involves the oneness of God and man. More often than otherwise mysticism is animated by a religious motive, and Spinoza's philosophy is profoundly religious. We have already seen similar mysticism in the Orphic-Pythagorean sect which formed so great a peril to Greek culture in the sixth century B. C., in the neo-Pythagoreans and neo-Platonists at the beginning of this era, in many of the churchmen of the Middle Ages, especially Scotus Erigena and Meister Eckhart. Bruno and many of the Humanists were mystics, and if we should wish to go outside our field, we should find mysticism to be the prevailing attitude of mind of the great Oriental peoples. Mysticism frequently is accompanied by belief in occult spiritual appearances, but that is not necessarily the case; nor was it the case with Spinoza. Spinoza's mysticism was purely intellectual. Although a religious philosophy with an immediate ethical bearing upon conduct, it was a scientific relationalism that could not tolerate the miraculous and the abnormal psychological

phenomena (such as clairvoyance, hallucinations, etc.). Spinoza is, on the contrary, distinguished as a mystic because he interpreted the universe in entirely non-human terms. His great service to mysticism lies in divesting the reality of life of every human attribution and laying bare a mathematical skeleton. The desire of the period to find a greater unity in life was responded to by him in a mathematical mysticism. To him the universe is not only divided into parts, not only is there no opposition between God and the world, but life is so completely a rational thing that no exceptional phenomena can occur. He believed that any description of God or of nature in anthropomorphic terms disunites life. Spinoza dehumanized the universe, conceiving matter to consist of elements, and conceiving spirit to consist of simple ideas. He resolved the personality of man into parts for the sake of the unity of the universe, and he obtained scientific clearness at the expense of humanity. Thus, instead of being able to say with Descartes, "I think and therefore I am," Spinoza could say, and wished only to say, "God thinks" (*Deus cogitat*).

Like the usual speculative mystic, Spinoza described his God in the terms of formal deductive logic. God is the most real being, *ens realissimum*. What is the most real being to a mystic? Would reality contain any finite quality such as the world around us contains? Can you say that God has this particular faculty, or is endowed with that concrete attribute? Does God enjoy, love, hate; does He create and destroy? But how can God be the real unity of the world unless He contains in Himself everything in the finite world? We approach here the threshold of *the problem of the concrete uni-*

versal, which has engaged the attention of so much of modern philosophy. A concrete universal is all-inclusive of finite existence, but at the same time is a self-consistent unity. In contrast with the concrete universal is the abstract universal, which is a unity, but outside of which all finite existence falls. While it was undoubtedly the concrete universal that Spinoza sought, his method could lead to nothing more concrete than the abstract universals of Plato and the Schoolmen. The world of finite things is included by Spinoza's God in the same way that blocks are included by a string which has been tied around them.

Spinoza's God is the most abstract entity which it is possible to conceive. All finite things fall outside Him. No quality can be predicated of Him, for to define Him is to limit Him. After the manner of the "negative theology" (see vol. i, p. 283), Spinoza refused to ascribe any quality to God. He does not feel, think, or will as we do, nor can extension be ascribed to Him in the sense of finite spaces. We can say only that He is not this and not this. Spinoza's conception of God is reached by dropping off all determinate qualities, until the most general and most abstract term is gained. The barrenness of this logical conception, its absolute emptiness and abstractness, makes all description of it impossible. God is a bloodless entity, an absolute logical necessity and the most abstract universal. Outside of Him falls all that we call life. If this is God's character, is He everything or nothing? If the process of abstraction rises so far above every limitation to an *ens realissimum et generalissimum*, — to the most real and most general entity, — if all content falls away from God, what does such an empty form amount to? The paradox in

Spinoza's philosophy appears here as in the case of all mysticism — for the mystic revels in paradoxes. This empty generality is all that really is. God is everything, and Spinoza points out empirical proof of this by insisting that the transitory life of man has its only meaning in such a substance. God is not this particular thing nor again that finite determination, but He is all these. He is the timeless reality of the temporal world, the infinity of finite things, the necessity of contingent nature. When therefore Spinoza speaks of God as having an intellectual love for Himself, and when he says that the attributes of thought and extension constitute the essence of the substance, he is not giving finite characteristics to God. He is struggling with language to express the inherent paradox of his philosophy.

Moreover, the delineation of the finite world with God as a background, as it appears from the point of view of a human being, is an inadequate presentation of Spinoza's profound conception of God. For the substance is not merely a neutral point nor the central point of the universe. The substance is all. All things have neither their explanation nor their existence in themselves. God alone has an existence that explains itself, and He is the reality and essence of all finite things. God is immanent in the world. Just as the sides of a triangle get their meaning from the triangle itself, so the significance of the attributes and modes of the substance lies in the substance.

The unity of Spinoza's God is further suggested by the relation of the attributes of thought and extension, however separate they must appear in their quality and causal dependence. Both are aspects of the same substance, in the one case in the form of extension, and

in the other in the form of thought. In the all-inclusive nature of God, presumably each moment has an infinite number of correlative moments corresponding to the infinite number of the attributes of God. Since to human beings only two of these worlds lie in sight, only two corresponding modes appear, but always two. This correspondence of the physical and psychical throughout nature is called in later times *panpsychism;* in the relation of the body and mind of a human being it is called *psycho-physical parallelism.* This correspondence helped Spinoza to solve the apparent dualism of the two worlds. While ideas are determined only by ideas, and motions by motions, both series point below to the divine substance which is the significance of both. They are like the top and bottom sides of a piece of paper, neither side constituting the piece of paper, but both being necessary to it. The substance is immanent in thought as well as in extension. Both thought and extension are aspects of God. The relation of thought and extension through the Deity discloses the monistic character of Spinoza's philosophy and seems to prove that he cannot be a materialist, although some critics have said that he is. The same reality is seen, now as consciousness and now as extension.

Spinoza's Doctrine of Salvation. Spinoza divided his *Ethics* into five parts. The first is a treatment of the nature of God; the second, of the nature and origin of the mind; the third, of the emotions; the fourth, of human bondage; the fifth, of human freedom. This most important writing of Spinoza, the only treatise on metaphysics which has been called Ethics, is a practical philosophy of life and redemption. The divisions of it, as they appear above, show that the philosophy of life

is looked at from two points of view: with reference to the nature of God, and with reference to the nature of man. We have above discussed the first point, — Spinoza's conception of God, whom he regards as pantheistic and mystic. But Spinoza's conception of the nature of the human being in relation to such a God is the other pole of this subject. The problem of life from the human point of view involves primarily the question of human freedom. Human freedom and human bondage are conditions that depend upon the human as well as the divine nature. By Spinoza's eliminating the human element from the nature of God, man himself has been reduced by Spinoza to an insignificant detail in a machine-like universe. Yet for man in his littleness Spinoza hews out a way to God in His greatness by his mystic reconstruction of the universe. Existence in Spinoza's pantheistic mysticism is, after all, a sphere of wonderful grandeur for man, — more wonderful and of wider utility than the existence which man is ordinarily supposed to possess. Since God is the reality of everything, man is deified; even the loss of man's essential humanity is the apotheosis of man.

Human salvation and freedom consist in being like God; bondage consists in being unlike Him, in mistaking the unreality of life for His reality. We are endowed with the ability of forming an adequate idea of God by means of our reason, but we are also endowed with the faculties of sensation, emotion, and imagination. The latter faculties make man a passive creature, for they bring him into dependence upon the things that act upon him and into bondage to them. We are passive when our activities are limited by such limited objects. While a passion seems to be the most active and turbulent

of our faculties, if we look at it more closely, we find that instead of being active ourselves during a passion, we are being acted upon by an external object. Only as we are purely rational, — only through the reason, — are we purely active. It is then that we are like God, free like Him, and then do we rise from insignificance to greatness. Then we transcend our false ideas of freedom and become necessary beings, for in God freedom is necessity.

To be free from the passions and the finite things of the world we must understand their nature; for to understand a thing is to be delivered from it. An illusion is not an illusion when we know it to be such. To see that all the passions, sensations, imaginations, and all the other modes of thought are human limitations, is to dwell within the reason. Spinoza's freedom is not, as will be seen, freedom in the ordinary psychological meaning of the term, but is the metaphysical freedom of being identical with the deity and determined by no finite thing. Freedom is rational knowledge. Nevertheless, freedom is ethical also, for it consists in overcoming the passions by reason. Freedom, therefore, has two sides: an escape from the emotions and an escape from obscure ideas — the goal in both cases being the life of reason. To attain freedom is to see the world as God sees it, which is the same as the reason sees it. This is to see each finite thing as eternal. Any concrete thing may be regarded by the human being as a finite and isolated thing out of all relation to other objects; or the same thing may be regarded as a detail of infinity. Looked at by itself, a thing is seen partially and falsely, for no finite thing has its explanation in itself. It is, however, seen truly when it is regarded, to

use Spinoza's own celebrated phrase, "under a certain form of eternity" (*sub specie aeternitatis*). This conception of eternity is one of the most admirable in Spinoza's teaching. When man rises through the reason to the consciousness of the eternity of the truth of a thing, the thing itself is transformed, and the man himself has gained salvation. Any circle that I may draw is imperfect, every leaf upon the forest trees is defective, all moral activities are wanting, if regarded in their time-limitations. But below all the imperfections of the universe is its absolute mathematical perfectness. There is nothing so abortive and evil that it does not have its aspect of eternity. Side by side with Spinoza's conception of infinity is his conception of eternity. Infinity is everlastingness, eternity is quality of being. Eternity has no reference to time. One minute may be eternal. The infinity of the substance is one aspect; the eternity of the substance is another. That eternity gained through the reason is salvation and immortality. God is reason, and by the act of the reason do we become one with Him. Our knowledge is, therefore, the measure of our morality. Knowledge and morality are the same; and whatever increases our understanding is morally good; whatever diminishes our understanding is morally wrong.

Nevertheless, from the point of view of the philosopher, there is nothing in the world that is morally good or bad, — nothing which merits his hatred, love, fear, contempt, or pity, — since all that occurs is necessary. The philosopher's knowledge of the determinism of the world lifts him above the usually conceived world of finite things to this mystic world, reconstructed by his intellectual love of nature or God. Love for God will

give to everything its proper value. It is the highest form of human activity. Love for God is an absolutely disinterested feeling, and is not therefore like human love, which is the passing from a less state to a greater. Love for God is peace, resignation, and contentment, for it is oneness with God. In fact, the love of man for God is the love of God for man; it is the love of God for Himself, since man cannot love God without becoming God. Thus man intellectually recognizes his oneness with God, and rejoices. Immortality is absorption in the eternal and necessary substance of the world. It is a common misconception that immortality is duration after death; immortality consists in looking at things under the aspect of eternity. The finite man perishes, but man's real self, which is God, survives.

Summary of Spinoza's Teaching. The rationalism of Spinoza is the final word of scholastic realism. It is a mathematical scholasticism in which the attempt is to make clear by the method of deduction all metaphysical problems. That the philosophical teaching of Spinoza is inspiring and ennobling, no one will gainsay. That his philosophy is not clear, is also true. In the beginning of his discussion, spirit is subordinated to nature; at the end, nature is subordinated to spirit. The result is that under the hands of Spinoza God has become a pure abstraction and without content, the world is an illusion, dualism is superseded by a monistic parallelism, individual activity gives way and becomes a pantheistic determinism. Yet amid all this a reconstructed world arises in which man is recompensed for all his losses by his participation in *infinity* and *eternity*.

Leibnitz * **as the Finisher of the Renaissance and the Forerunner of the Enlightenment.** Leibnitz is the last of the remarkable group of Rationalists of the Renaissance, who so fully represent the spirit of its Natural Science epoch. But Leibnitz also carries us into the next period of modern philosophy — the Enlightenment. He is the transition philosopher. If the reader will examine the dates of his life, he will observe that Leibnitz lived until twenty-five years after the Enlightenment was ushered in by Locke's *Essay on the Human Understanding* (1690). But as Leibnitz had already formed his own philosophy by the year 1686, even so versatile a mind as his could not then renounce the Rationalistic point of view for a new one. Some of his writings, such as his *Correspondence with Clark and Bayle*, his *Theodicy*, and his *New Essays*, show that he participated in the new movement of the next period. Yet the majority of his philosophical writings show him to be a Rationalist. Although he may be called the "father of the Enlightenment," the body of his thought belongs to the Renaissance. His main motive was that which animated all Rationalists — of stating theology in scientific terms. The immediate occasion for his doing this was the political necessity of peace among the religious bodies of Germany.

The effort of Leibnitz to restore the individual to his central place in the universe was a *secondary motive.* It nevertheless makes him the forerunner of the Enlightenment. Of the Rationalists, Leibnitz speaks for

* Read Rand, *Modern Classical Philosophers*, pp. 199–214; Eucken, *Problem of Human Life*, pp. 388–405; Weber, *History of Philosophy*, pp. 343–369; Hibben, *Phil. of Enlightenment*, pp. 161–193.

the future, just as Spinoza for the past. Leibnitz unites the Renaissance and the Enlightenment, just as Spinoza joins the Renaissance and the Middle Ages. Spinoza is the Rationalist who utters the final word of scholastic realism, while Leibnitz presages the coming individualism. Spinoza's philosophy is science buried in traditionalism; Leibnitz's is science breaking through traditionalism. Spinoza harks back to universals and particulars, substance and forms; Leibnitz points forward to vortex rings, energy, and dynamics. From Leibnitz's original purpose to rationalize theology, and to succeed where Descartes and Spinoza had failed, there emerges a new motive. He no longer lays the emphasis entirely upon the universal, but he shifts it in part to the particular. The pantheism of Spinoza had systematized the individual out of its reality. Leibnitz's conception of the individual as dynamic and his conception of the importance of the infinitesimal redeem the individual and bring Leibnitz into more modern times. To classify Leibnitz as a Rationalist is, therefore, not to describe him fully.

The Life and Writings of Leibnitz (1646–1716). Compared with Descartes and Spinoza, Leibnitz had a life that was long in time and rich in experience. Descartes died at 54 and Spinoza at 45, while Leibnitz lived to be 70. In striking contrast with Spinoza's career, there was no time in the life of Leibnitz after his graduation from the university that he was not in public service. He held the offices that would naturally go to the hanger-on of princes — some of them grandiose ones. While theoretically the interests of the three Rationalists were the same, Leibnitz differed from his predecessors in that his study of philosophical problems al-

ways grew out of some practical problem or political occasion. Leibnitz was not an academic thinker, and his "writings were called forth to estimate some recent book, to outline the system for the use of a friend, to meet some special difficulty, or to answer some definite criticism." Philosophy was only one of the interests of Leibnitz. He was jurist, historian, diplomat, mathematician, physical scientist, theologian, and philologist. Leibnitz was as much at home with the theories of Plato and Aristotle of ancient time, with those of St. Thomas and Duns Scotus of mediæval time, as with the science of Descartes and Galileo. He was precocious, had a prodigious memory and a reactive mind. In the wealth of his information and the productiveness of his genius, he stands with Aristotle as unequaled. Descartes, Spinoza, and Leibnitz belonged to the inner circle of scholars of the time, but Leibnitz was also in personal touch with political affairs and in intimate acquaintance with many of the important rulers. He was in the service of the Elector of Mainz and later of George I of England when George was only Elector of Hanover. He was distinguished by Peter the Great of Russia and Ernst August, Emperor of Germany. He corresponded with Eugene of Savoy and he was ambassador to Louis XIV of France. Sophie Charlotte of Hanover, who married the King of Prussia, was especially interested in him, and he wrote for her his *Theodicy*. The three great Rationalists came from different strata of society. Descartes was a nobleman's son, and he voluntarily relinquished the life that Leibnitz was ambitious to enjoy. Spinoza came from the lower class. Leibnitz was the son of a college professor and belonged to the upper middle class. The ambitions

of Leibnitz reached for large ends, as often happens among educated people in the middle walks of life. Among other things, he tried to reconcile the Catholics and Protestants, and he tried to universalize language by getting universal characters for all languages.

The literary production of Leibnitz was enormous, consisting of some lengthy works, but mainly of correspondence (at one time with a thousand persons) and of dissertations to learned journals and societies. No one book contains his philosophy — the *Monadology* coming the nearest to doing so. His most considerable work is his *Theodicy*. He himself published in book form only two works: his university dissertation on *Individuation* and the *Theodicy*.*

In spite of his many successes, the life of Leibnitz was not happy. From death or other causes his noble patrons changed, until he was left without a patron. His life went from bad to worse, and his death occurred almost unnoticed.

The seventy years of Leibnitz's life fall into four periods. That he passed through three of these periods by the time he was thirty shows the voracity and versatility of his mental powers during their formative and acquisitive state. It also reveals the unusual length of his productive period, — from his thirtieth to his seventieth year. Ten years after his productive period began, when he was forty, he had completed his philo-

* A good selection of Leibnitz's works for the student to read is: *Discourse on Metaphysics* (1690), *Letters to Arnauld*, *Monadology* (1714), *New System of Nature* (1695), *Principles of Nature and Grace* (1714), *Introduction to New Essays* (1704), and the *Theodicy* (1710). See Calkins, *Persistent Problems in Phil.*, p. 74, note.

sophical theory, so that the last thirty years of his life were free for its elaboration and elucidation, and in part for his departure from it. The details of Leibnitz's life are as follows: —

1. *Leipsic and University Life* (1646–1666).

Leibnitz was the son of a professor of the University of Leipsic. He entered the University at the age of fifteen; received his bachelor's degree at seventeen, and his doctor's degree at Altdorf at the age of twenty. He was offered a professorship on account of his thesis, but he declined. He published as his bachelor's thesis, *The Principle of Individuation* (1663).

2. *Mainz and Diplomacy* (1666–1672).

Meeting Baron John of Boineburg, who became his patron, Leibnitz went with him to Mainz, and entered the service of the Elector of Mainz. At this time Leibnitz wrote many pamphlets at the Elector's request, on the religious and political questions of the day. He wrote *A New Physical Hypothesis* in 1671.

3. *Paris and Science* (1672–1676).

Leibnitz began this period with a diplomatic mission to the court of Louis XIV in 1672; but during the year both Boineburg and the Elector died, and Mainz was no longer his home nor diplomacy his interest.

He remained in Paris (and London) three years longer, and spent the time in acquiring the "new science." In Paris he met Arnauld the Cartesian, Tschirnhausen the German mathematician, logician, and most discriminating critic of Spinoza, and he studied with Huyghens the Dutch mathematician. In London he met Boyle, the chemist, Oldenburg, secretary of the Academy of Science, Collins, the mathematician, and he corresponded with Newton. On his return to Han-

over he called on Spinoza, who showed him the manuscript of the *Ethics*.

4. *Hanover and Philosophy* (1676–1716).

Leibnitz became court councilor and librarian to the Duke of Hanover (Brunswick-Lüneburg). He was involved in a multitude of administrative, historical, and political tasks, and he carried on an enormous correspondence. Among other things he wrote the history of the reigning family, which necessitated his going to Rome and Vienna. In 1684 he published his discovery of the differential calculus, over which arose the celebrated controversy as to whether he or Newton made the prior discovery. In 1686, in his fortieth year, he constructed his philosophical system. However, he showed his affiliation to the coming age by introducing into his system in 1697 the term "monad." *Nearly all his important works were produced in this period.* In 1700 he founded the Academy of Sciences in Berlin. He was instrumental in the founding of an academy at St. Petersburg, and he planned academies at Dresden and Vienna.

The Three Influences upon the Thought of Leibnitz.

(1) *His Early Classical Studies.* The father of Leibnitz, who was a professor of moral philosophy at Leipsic, died when his son was young. Left much to himself, the boy spent his time in his father's library. At eight years he had acquired Latin; at twelve he had read Seneca, Pliny, Quintilian, Herodotus, Xenophon, Cicero, Plato, the Roman historians, the Greek and Latin fathers. He became so absorbed in scholastic studies that his friends feared that he would not leave them, "not knowing that my mind could not be satisfied with only one kind of thing." There can be no

question that this scholastic training gave him a first hand and sympathetic appreciation of scholastic philosophy. The Aristotelian conception of cosmic purpose, which he got at this time, never left him. Among the writers of the Natural Science Period he alone returned to Aristotle. He made Aristotle's teleological cause an integral part of his doctrine. His motto finally became, in his *Theodicy*, "Everything is best in this best of possible worlds." While for a time he turned from Aristotle to Descartes, in his final construction of his theory he borrowed more from Aristotle.

(2) *The New Science and His Own Discoveries.* Leibnitz was more fortunate than many of his contemporaries in that his university had already included in its curriculum the study of mathematics. At the age of fifteen he was devoting himself to mathematics at Jena, and he said that the study of Kepler, Galileo, and Descartes made him feel as though "transported into a different world." Later in life he said of himself, that at fifteen he had decided to give up the scholastic theory of Forms for the mathematical explanation of the world. He became acquainted with the theories of Hobbes and Gassendi in 1670, when he was at Mainz. In 1672, at the age of twenty-six, when he was in Paris, he made himself possessor of all that the celebrated circle of Parisian scientists had to teach. He had gone to Paris a dualist; he returned to his native land with the Aristotelian teleology side by side in his mind with the Spinozistic conception of identity and necessity, the Spinozistic method, and the mathematical theory of the significance of infinitely small particles. The next ten years (1676–1686) were spent in overcoming his own dualism by systematizing these new theories acquired

from so many sources. In 1680 he had universalized the concept of force so as to apply it to both souls and bodies. In 1684 he published his discovery of the differential calculus, in which he has had to share honors with Newton. In 1685 he asserted that the centres of force have individuality. He was led to this conclusion on account of the discovery of small organisms by the microscopes of Swammerdam and Leeuwenhook. In 1686 he successfully organized his collected material into his final system, although it was not until eleven years later (1697) that he called these centres "monads." Probably he got the term "monad" not from Bruno, but from the mystic chemist, Van Helmont.

Not only the content, but the form of his philosophy was determined by his mathematical studies. His philosophical diction is remarkably lucid. Mathematics reinforced his early resolve "in words to attain clearness and in matter usefulness." His later discussions contain many terms that he had borrowed directly from mathematics.

(3) *Political Pressure for Religious Reconciliation.* When Frederick the Wise of Saxony in 1519 refused the crown of Emperor, Germany was thrown into internal strife that in one hundred and thirty years destroyed all its material wealth and depopulated the country. This terminated in the Thirty Years' War (1618–1648) and the Peace of Westphalia. Leibnitz was born two years before peace was declared. He was the first German scientist in two hundred years. Both Catholics and Protestants were weary of strife, and there was a general movement toward religious reconciliation. Thus religious amity was the most urgent public question.

Pietism had been one of the movements in Germany during the recovery of the country from the Thirty Years' War, and it represented the best side of German civilization at that time. It was a reaction on the one side against the mechanical theory of the scientists, and on the other against the destructive strife of the old and new confessions. The mother of Leibnitz was not only a Protestant, but also a Pietist, so that the subject of religion early formed an important part of her son's training. When he entered the diplomatic service of the Elector of Mainz the question of religious reconciliation took practical form for him. No doubt his philosophy as a theory of reconciliation grew out of such practical issues, as they were presented to him at Mainz. Leibnitz had, therefore, a part in the religious reaction in Germany in the last of the seventeenth century, which aimed to reconcile the divergent interests of religion and science. He tried to effect this in no external way, by patching together irreconcilable elements, but in an internal way, by an examination of fundamental principles. With his early training, his theological reading, and his wide public experience, Leibnitz was fitted to take a prominent part in the movement for reconciliation.

The Method of Leibnitz. Although the philosophers who immediately followed Spinoza did not dare to accept his philosophical conclusions, they adopted his method. They united it with the syllogistic processes of formal logic for the deduction of all knowledge. This method became very prevalent, as is seen in the practices of the German Cartesians and in the preparation of academic text-books. Examples of this are Jung, Weigel, who was Leibnitz's teacher, and Puffendorf,

who tried to deduce by the geometrical method the entire system of natural right from a single principle of human need. In the next century Wolff used this method in writing his Latin text-books.

When this aspect of Spinoza's teaching was gaining a foothold in Germany, Leibnitz came into sympathy with it through his teacher, Weigel, and at first was one of its most ardent supporters. In jest he showed by this geometrical, syllogistic method in sixty propositions that the Count Palatine of Neuberg *must* be elected King of the Poles. In seriousness he believed that all philosophical controversies would cease when philosophy should be stated like a mathematical calculation.

Hobbes's theory of words as counters to be used in conceptual reckoning, the universal formulas of the Art of Lull and the pains which Bruno had taken for its improvement, the Cartesian belief that the geometrical method would prove to be an art of invention — all these were influences upon Leibnitz, that committed him to the method of Spinoza and made him pursue that method energetically. Leibnitz was part of the widespread movement of the time to form a *Lingua Adamica* — a universal language, which should discover fundamental philosophical conceptions and the logical operations of their combinations. In brief, Leibnitz hoped to form a philosophical calculus.

What, asked Leibnitz, are the highest truths which in their combination yield all knowledge? What are the truths, so immediately and intuitively certain, that they force themselves upon the mind as self-evident and thereby form the ground for the deduction of all knowledge? They are of two classes: (1) The universal

truths of the reason, and (2) The facts of experience. The truths of the reason are forever true; the facts of experience have a truth for that single instance. But both are true in themselves and not from deduction from anything else. They are "first truths," for a thing is true if it can be deduced from the reason or tested as an experienced fact. The two kinds of truth are the rational or *a priori*, and the empirical or *a posteriori*. The difference between the starting point of the Rationalism of Leibnitz and the Enlightenment of Locke appears here. Locke said, "There is nothing in the mind that does not come from the senses." "Except the mind itself and its operations," added Leibnitz in comment.

But there is a difference between these two kinds of truth. The truths of the reason are clear and distinct; the truths of experience are clear but not distinct. Leibnitz is, be it observed, making a distinction between the two terms of the pet phrase of the Rationalists — "clear and distinct ideas." He means that rational truth is so transparent that it is impossible to conceive its opposite; that empirical truth is only clear, and its opposite is thinkable. It is impossible to think that the three angles of a triangle equal anything but two right angles, but it is possible to think that its side, which is now two inches, may be four inches. Thus emerge the two logical principles upon which Leibnitz founded his philosophy: rational truths depend upon the *Principle of Contradiction;* empirical truths depend upon the *Principle of Sufficient Reason.* At first Leibnitz conceived that this distinction between truths did not apply to God, but only to man. Man must rejoice in the few rational truths in his possession and

be content with merely establishing the actuality of his experiences. The divine reason can, however, see the impossibility of the opposite both in rational and in empirical truth. Later on Leibnitz conceived the distinction between the two kinds of truth to be absolute. That is, in the nature of things the two truths differ. The rational truth has no opposite, but is a *necessary* truth; the empirical truth has an opposite, and is a *contingent* truth.

Leibnitz thus shows the fundamental principles upon which knowledge is based, but what does he say about the logical method of their combination? Nothing. No one would ever suspect from Leibnitz's philosophical remains that he had planned a system of philosophy according to the method of Spinoza. The many pamphlets of Leibnitz on many scattered subjects show how far short he fell of his ideal of a universal philosophical calculus. He was too versatile, his interests were too diversified, to carry through so slow and plodding a task. He merely stated the principles upon which a systematic symbolic philosophy might rest, without developing these principles in a logical way. Like Bacon, Leibnitz conceived a method that was more of a hope than an accomplishment.

The Immediate Problem for Leibnitz. Perhaps Leibnitz was called away from this purely theoretical problem of method by the practical problem of reconciling science and religion, which problem in his day had become particularly acute. For science had made rapid strides since the days of Descartes, had drawn very far away from religion, and Leibnitz's attempt to reconcile science and religion was much more difficult than that of the preceding Rationalists. Leibnitz had

accepted the most radical results of science, but he saw that science had yielded only a mechanical view of the world. Politics demanded in the exigencies of that hour some principle of unity. He sought to find some philosophical principle for the *living, religious character* of the universe, and a principle that at the same time would preserve the results of science. He therefore sought to leave the conception of mechanical nature intact and go behind it for a teleological principle. He examined the mechanical principles of the science of his day and found them embedded in a deeper metaphysical principle.

The Result of Leibnitz's Examination of the Principles of Science* — A Plurality of Metaphysical Substances. What was the developed scientific principle of Leibnitz's time? And what was the result of his analysis of it? The principle was the mathematical principle of Galileo in more complex form, for there had been added to it since Galileo's day the concept of the atom. That is to say, the fundamental scientific principle was that nature consists of the measurable movements of atoms. From his analysis of this, Leibnitz obtained as follows his conception of a plural number of substances, which he called monads.

1. Leibnitz first scrutinized the scientific conception of motion. His analysis of motion into infinitely small impulses by the method employed by Galileo, Huyghens, and Newton had already led him to one important discovery — the differential calculus. Now he scrutinizes it further and discovers that the fundamental ground of motion is *force*. While Leibnitz was

* Read Hibben, *Phil. of Enlightenment*, ch. vii; Windelband, *Hist. of Phil.*, pp. 420–425.

in entire agreement with other scientists in their effort to reduce all phenomena to motion, he insisted that motion was not by any means the fundamental thing. He calls the Cartesian conception of motion the antechamber of true philosophy. There is no absolute motion nor absolute rest. Motion and rest are relative to each other. Descartes' theory that there is conservation of motion is incorrect. Motion and rest are the phenomenal changes of force. Force alone is constant and conserved. Physics points beneath itself to metaphysics; motion points to force. Force is what is fundamental in nature. Force is "that which in the present state of things brings about a change in the future." Therefore force as the substance of nature is super-spatial and immaterial, and therefore the basis of the new physics ought to be dynamic metaphysical substance.

2. Leibnitz next examined the scientific conception of the atom. Gassendi, one of that celebrated group of Parisian scientists, had been the author of the introduction of Greek atomism into modern thought. It had been generally accepted by scientists and combined with the mathematical hypothesis of Galileo. Leibnitz had known Gassendi in Paris, and he took the hard, inelastic atoms of Gassendi under examination. He agreed that the atomist was perfectly correct in saying that material bodies consist of simple parts or atoms. But Leibnitz insisted that the atomist erred in thinking such simple parts to be physical. However simple the parts might physically appear to be, they were not really simple. However small a bit of matter may be, it may be divided again, and the dividing process may go on to infinity. The atom is the extended, and the extended cannot be simple

or real. Substance must be unextended, and the materialists were wrong in attributing substance to the extended. Is there anything simple that has a qualitative character? Is there anything real below the physical atoms? Yes, the metaphysical atoms. The indivisible, immaterial unit lies beneath the physical atom, and in order to reach it we must pass beneath the physical into the metaphysical. This immaterial or metaphysical atom is called by Leibnitz the *monad;* and thus is Leibnitz's theory called *monadology.*

There are three kinds of points, or units, or "simples." There is the mathematical point, which is simple enough, but it is only imaginary. There is the physical point, or atom, which is real but not simple. There is, lastly, the metaphysical point, or monad, which is both real and simple. The metaphysical point is the only true point. To call the material atoms real, only shows "the feebleness of the imagination, which is glad to rest, and is, therefore, in haste to make an end of division and analysis."

3. Leibnitz then identified force, as the substance of motion, with the metaphysical atom, as the substance of the material atom. The result was the monad, as he conceived it. The monads are the principles of active working. They are the super-spatial and immaterial principles in which the mechanical principles of the universe have their roots and meaning. Nature is not dead; it is not merely extended. It is alive, resistant, and reproductive. If, as Spinoza taught, there were only one substance, nature would be non-resistant and passive. But as a matter of fact there are many substances acting for themselves, many bodies resisting other bodies. They are the centres of separate activity, and

there are as many forces as there are things. There is no body without movement, no movement without force. Thus does Leibnitz reintroduce vitalism in a maturer form than is seen in neo-Platonism. Life becomes the principle of nature. Purpose is placed at the centre of things.

The Double Nature of the Monads. The student will find that the philosophy of Leibnitz is spoken of as a pluralism, but the student will also find that Leibnitz devoted nearly all his strength to prove that the world is after all a unity. Leibnitz analyzed the world into a plural number of parts, and the question then with him was, how to put these parts together again in an organic unity. This accomplishment would depend a good deal upon his conception of the nature of the parts.

The monads have a double character. Leibnitz conceived the monad (1) as a force centre and (2) as an immaterial soul. This makes an equivalence of psychical and physical attributes which reminds us of the Stoics' "fiery reason" of God. The word "force," as Leibnitz uses it, squints both toward physics and toward psychology. But such ambiguity about the monads, the cornerstones in Leibnitz's philosophy, assists Leibnitz's reconciliation at the start. Here, in a miniature, the physical and spiritual lie in unity. The monad is conceived as a *soul-atom*.

Leibnitz came to philosophy with a mind saturated with the mathematical ideas of the continuous, the infinitesimal, and the possible. He thought of the monads as potentialities or possibilities. He looked upon the world as essentially a developing world. Behind the facts that seem to us inflexible, lies the great world of generating force. Explanation of the actual can be made only in

view of what the actual may be and has been. Let us enlarge the scope of man by so widening his conception of the actual that it will include the possible. Leibnitz also spoke of the monads as infinitesimal. He thereby lifted the conception of the infinitesimal from the realm of mathematics into that of metaphysics, just as Hobbes universalized the conception of mechanics by lifting it to metaphysics. Leibnitz, therefore, did not regard the limits of perception as the limits of nature: the reality of a nature object must be too small to be the object of perception. In the same way he made use of his mathematical conception of continuity. Leibnitz's conception of nature-continuity is one of his contributions to philosophy. Within itself the world of nature consists of a continuous gradation from the lower to the higher forms; and also the world of nature is continuous with the world of the spirit. There are no leaps in the series from matter to God. Seeming differences in kind are only differences in degree; for example, evil is only the absence of good; matter is only an obscure idea of spirit.

But this Leibnitzian atomism consists of soul-atoms. These monads, these force-centres are souls, and the mathematical qualities have a place in Leibnitz's description of the psychical powers of the monad. The monad is a soul, for soul is the only substance in the universe that may pass through many changes and it, itself, not change. The self is the only subject of which many predicates may be asserted, while it, itself, may not be the predicate of any other subject. The idea of myself underlies all my mental states. The monad is an entelechy, or an entity having its purpose within itself. All its attributes are contained within itself, and it is, therefore, by nature, sufficient unto itself. It is an

individual which passes from one state to another, moved by its "constitutional appetition."

Among the psychical powers none is more important in Leibnitz's description of the monad than its power of representation. Representation is the general function of the monad — from the lowest to the highest monad. This means that each monad is the world force, yet in a particular form, — a world substance, but in some peculiar aspect. Every monad is a microcosm. Each represents the world so far as it is conscious of its own activity. But it is evident that all things in the universe are not conscious, and therefore all soul-monads are not conscious. In souls there are, therefore, more than conscious thoughts — there are thoughts that are unconscious. Among the Rationalists Leibnitz is the first to give significance to the so-called unconscious states that form so important a place in modern psychology. (But see Plotinus.) As a wave is composed of small particles of water, so the mind is made up of a myriad of unconscious states. The conscious state is the general effect of the whole. A soul-monad contains in itself at all times representations of the whole world, some obscure, some clear. This power of universal representation makes the monad a microcosm. What we call knowledge of the external world is our representation of it within ourselves. This representation is possible to us because we reproduce it in miniature. Since the monad directly perceives only itself and its own states, it follows that the more clearly and distinctly it is conscious of its own activities, the more adequately does it represent the cosmos. The converse is also true — that the more a monad represents the cosmos, the more truly does it represent itself.

In his development of his description of the monad, Leibnitz hits upon two catch-phrases, one of which presents his doctrine of the physical isolation of the monad, the other presents the doctrine of its ideal psychical unity. These phrases are: "the monads are windowless" and "the monads mirror the universe." By "windowless" Leibnitz means that each monad is "like a separate world, self-sufficient, independent of every other creature." "Having no windows by which anything can enter or depart," the monad can perceive only its own states. Whatever happens to it comes from itself alone as a purely internal principle. The monad's development is self-development and not the result of external changes. Nevertheless the monad is a "mirror of the universe." In this psychical qualification of the nature of the monad, its physical isolation vanishes and the way is open for a unity of monads, which would have otherwise seemed to be physically hopelessly sundered. How is it possible for each of the numberless monads, all so different, to "mirror the universe"? The answer is found in their psychical power of representation.

The Two Forms of Leibnitz's Conception of the Unity of the Substances. The principle of unity among the monads is called by Leibnitz a *preëstablished harmony*. He presented this principle of harmony in two ways. In part the harmony comes out of their constitution, as he conceived it to be. In part Leibnitz artificially superimposed it upon the monads for theological reasons. In either case it is preëstablished.

The Intrinsic Unity of the Monads — The Philosophical Unity. There is a family resemblance among the monads. The lowest reproduces the universe in obscure and elementary representations. Minerals and

plants are sleeping monads with entirely unconscious ideas. Animals are dreaming monads. Man is a waking monad. The highest monad is God, who reproduces the universe in clear and distinct ideas. Between God and matter there is a series of monads, graded as to the clearness of their ideas. All contain the universe by representation. All are bound together according to the principle of continuity; plants are lower animals and animals are less perfect men. Man is a monad whose conscious activity has risen to the height of self-consciousness, with the cognate power of reason. There is no inert matter; no soul-less bodies nor body-less souls. The smallest portion of dust is the habiliment of animalculæ. Nothing is dead, and nature is a gradation of monads in differing degrees of activity.

Metaphysically the monads are isolated, yet in nature as we see them, they live in groups, and compose the things which we call plants, animals, and men. An organic thing is a combination of monads with a central ruling monad. This central monad is the soul of the group; the subordinate ones form the body of the organism. The influence of the soul or ruling monad upon the body-monads is purely ideal. They all strive for the same end, which the soul represents more clearly. The group acts spontaneously and together, not from any outside influence. An inanimate object differs from such a living organism, inasmuch as it is a group of monads without a soul or a ruling, central monad; and therefore such a monad is both soul and body. There is therefore no dualism between soul and body in any creatures, for body is only obscure or unconscious activity. The body consists of monads having a confused sense of their activity.

This continuity and unity within the world, as Leibnitz sees it, is only the logical development of the unity with which he originally endowed his monads. Although he starts the monads as "windowless," he also says that "they mirror the universe." They are so conceived as to be originally physically separated, but psychologically and ideally united. "Their natural harmony resides in an ideal of perfect activity, while in actual existence they are independent." The ideal which unites them is God, the last term in the graded series of the monads. He is the monad of monads, because He is perfect, conscious activity. Just as the various groups of monads are ruled by a central soul-monad, so the world of these groups is an hierarchy, which derives its unitary and harmonious character from this dominating monad. The world may be likened to a pyramid with God at the apex. The world is like a machine which differs from other machines, in that its parts are little machines. Although the parts seem to operate separately, they are under the dominating control of God. God is their intrinsic unity and the universe is a pre-established harmony.

A comparison with Spinoza's conception of the world of nature brings out Leibnitz's meaning effectively. Both philosophers conceive nature phenomena to be under the law of mechanical causation. To Spinoza, however, all phenomena are qualitatively alike; there are no grades or distinctions of value between them. All are modes of substance and all illusions in the sight of God. To Spinoza phenomena are homogeneous. Leibnitz's estimate of the world of nature is quite different, and for him nature has a far richer endowment. The phenomena of nature are not homogeneous. Their

difference does not consist in their content, but in the degree in which they represent the universe. The law of nature is a unifying principle that gives unitary individuality to the members under the law. The individuality of the terms of the nature-series is implied in the very nature of the law of necessity, and on the other hand, the individual terms, for their part, transform the law of necessity into a principle of unity that is higher than bare necessity. In a necessitated series, Leibnitz points out, each term is determined by the preceding, and in turn each term determines the events that follow. Thus, while nature phenomena are a series and a necessitated series, it is a series whose existence depends upon each event having not only its place, but its unique place. No other event can fill that place, and the conditions that give the event its place constitute its individuality. Every finite event has, so to speak, its formula, and this gives individuality to each term of the series, which appeared to Spinoza only as a homogeneous, mathematical, and characterless mode. Life is meaningful to Leibnitz, because each member of the necessitated series of events has its unique part to play. The changes of life are to Spinoza void of meaning, because he conceives them to be undifferentiated. The law of mechanical necessity became under Leibnitz's hands a principle of harmony, a teleological principle. Even in the necessitated mathematical series, such as Spinoza conceived the world to be, Leibnitz believed that necessity implies individuality and individuality implies purpose.

How vital, therefore, does life now appear, with its mechanical members transformed into living units! Universal striving or force fills nature, and the surging

of individual forces gives a new meaning to the unity of the whole. The mechanical series — the physiological changes of our bodies and the efficient causes in nature — are only the expression of the inner teleological development. Leibnitz points out several pregnant principles that are aspects of this preëstablished but intrinsic harmony. In the first place, nature has no breaks and abhors a vacuum; and the series is a continuous one, — *the law of continuity*. Member follows member in continuous and graded order. Their qualitative differences are differences of quality of activity. Rest and motion, good and evil, are differences of degree. In the second place, there is nothing superfluous; no two things in nature are alike. If they were alike, they would be identical — *the law of the identity of indiscernibles*. Although there is no absolute antithesis or contrast between things, there is no absolute likeness. Every monad must be differentiated from every other intrinsically, *i. e.* according to its perfected activity. Therefore, in the third place, every member has an excuse for being — *the law of sufficient reason*. Every member has its part to perform and no other can act as an understudy for it. However insignificant any member may appear to be, it is as unique as its bigger neighbor.

The Superimposed Unity of the Monads — The Theological Unity. The intrinsic unity of the monads is derived naturally from the monads themselves, but it is an unattained ideal for which they strive. When Leibnitz turns his philosophy into a theodicy, or justification of the nature of God, this unity of the world takes on a different form and assumes a theological importance. The unity is no longer an intrinsic unity, with no actual but only ideal existence depending upon the

highest monad in the series, but is an actual personality who exists apart from the world. The world is his eternal purpose. Probably this conception was always in the background of Leibnitz's thought, but it cannot be deduced from his philosophy. It is a conception afterwards superimposed upon his philosophy. Leibnitz now conceives God not as an ideal goal, but as a perfect and actual person, whose reason impelled Him to construct the best possible world. The world in which we live is the world He chose. It is perfectly conceivable that the world could be different. Why, among all the possible worlds, did God choose to construct this world? There is no reason in logic, but in fact. There was no necessity for its construction. The fact is the excellence of the world. Spinoza said that all possible worlds exist. Leibnitz said this best possible world exists. Look about you; is it not so?

The best possible world is a world of free agents, whose acts are rewarded or punished according to their deserts. If we discover what seems to be inexplicable evil, we must regard it as an incident in the harmony of the whole. The world would be less good without evil. There is no more evil than there ought to be. The world which God conceived to be the best possible — this world — is a world of lights and shades. Evil comes from the free agency of man, and God is not responsible for it. It is better to have evil and free agency than no evil and no free agency. Evil after all is not positive, and is only due to the indistinct ideas of man. It is the absence of good, as cold is the absence of heat.

Thus a preëstablished harmony was constructed by Leibnitz that does not come out of his original philosophical premises. Leibnitz used his celebrated figure of

the two clocks to illustrate the harmony of the monads. Two clocks keep the same time, not because they influence one another (interaction), nor because the maker moves the hands of one (Occasionalism), but because they have been thus constructed by an intelligent Creator. Thus the harmony of the world implies a personal God. Leibnitz's philosophical Rationalism here passed into theology, and his metaphysics became an ethics. Leibnitz began with a monadology, and by means of the conception of harmony passed to an optimism.

CHAPTER VI

THE ENLIGHTENMENT (1690–1781)

The Emergence of the "New Man," — Individualism. In passing to this period we should recall the two objects of interest that distinguish modern from mediæval thought: the "new man" of modern Europe; and the "new universe"— new in its geographical outlines and in its intellectual materials. We have already found that the two hundred and more years of the Renaissance, the first period of modern thought, was absorbed in exploiting the second of these objects — the "new universe." In fact the "new man" had been so interested in the "new universe" that he had not thought of studying himself. He had systematized the great wealth of his acquisitions and had constructed great systems of science and metaphysics.

This second period of modern thought — the Enlightenment — begins when the "new man" turns away from his intellectual struggles with his environment and attempts to understand his own nature. Thus the more important of the two objects emerges last; and this turn to self-reflection constitutes the century of the Enlightenment. The Renaissance had been subjective and spectacular; the Enlightenment was subjective and tragic. The mental activity of the Renaissance had been vital, spontaneous, and unconscious, like the awakening from sleep; that of the Enlightenment

* Read Windelband, *Hist. of Phil.*, pp. 437–440, 447–449, 500–502; Hibben, *Phil. of Enlightenment*, pp. 3–13,18–20.

was self-conscious and attitudinizing. The man of the Renaissance had been in love with nature; the man of the Enlightenment was in love with himself. Like the Greek Sophistic Illumination, which is its parallel in ancient history, the Enlightenment turned away from cosmological and metaphysical problems. On the other hand, the philosophy of the Enlightenment penetrated all departments of life and found expression in practical questions. Erdmann has well expressed the meaning of these nine decades of the Enlightenment as "an effort to raise man, so far as he is a rational individual, into a position of supremacy over everything." It was during this period, which we are now about to enter, that Herder brought into currency in Germany the word "humanity." In England the same sentiment was uttered by Pope in 1732 in his *Essay on Man*: —

> "Know then thyself, presume not God to scan;
> The proper study of mankind is man."

The Enlightenment marks, therefore, the rise of modern individualism; and the concerns of the individual become the important object of consideration. The novelty of the great discoveries and inventions of the Renaissance had lost its lustre. The "new universe" had become old and familiar, but through his accomplishments the "new man" had begun to feel the strength of his liberated powers. For had not the wonderful world of the Renaissance been his own accomplishment? Had not all its notable constructions been the creations of his powers? The "struggle of traditions" to revive antiquity and to incorporate the "new universe" upon an old basis; the "strife of methods" to reorganize the "new world" upon a new basis — re-

vealed this great fact: that man has "world wisdom." Man in his supremacy occupies the entire foreground, and interest in the "new universe" fades away. The "new universe" is now seen in the light of one's personal interests. Man is supreme, and to his word there can be no exception. There is constant reference during this time to the "light of reason"—to a bright inner, rational illumination in contrast to the vagaries of mysticism and the obscurities of dogmatism. The worship of genius arises and with it a contempt for the unenlightened. "Thus would I speak, were I Christ," said Bahrdt. No wonder that Goethe described the Enlightenment as an age of self-conceit!

The Practical Presupposition of the Enlightenment—The Independence of the Individual. The "new man" emerged from the Renaissance as the most important object of consideration, and during the Enlightenment there was never the slightest question about his independence. The individual became the original datum of this period into which we are now entering; he was considered to be the only thing that is self-intelligible; he was the starting-point from which all social relationships were to be explained. Among the many problems that arose, the independent existence of the individual remained unquestioned. It was the period of "liberty, equality, and fraternity." The problems were about the relations of the individual; never about the individual himself, for concerning the individual no problem could arise. The individual rejoicing in the exuberance of his own powers, the "monad enjoying himself," dominated everything. The monadology of the Renaissance became an atomism in the Enlightenment. The individual was the practical assumption of the period.

The Metaphysical Presupposition of the Enlightenment. There was a metaphysical background to this practical assumption of the individual. This was the Cartesian dualism of mind and matter. Although the eighteenth century despaired of a successful metaphysical construction of the "new universe," and although its attention was riveted on an analysis of human relationships, it must not be supposed that the period was without its metaphysical bias. Such is not the nature of human history; and if an epoch refuses to discuss metaphysical questions, it is because it assumes some metaphysics as true. The assumption of the independent individual implies the independent existence of matter. The Enlightenment assumed the Cartesian theory as correct. While many were the polemics against metaphysical speculation, the Cartesian dualism was nevertheless in control. Here within is the independent existence of mind; and it would naturally follow that there without is the equally independent existence of matter. The conception might fade into a ghost-like dualism, as in Berkeley and Hume, but the dualism never entirely vanished. This has since been known as the philosophy of "common sense," and is to-day the easy attitude of those not interested in metaphysical discussions. "Common sense" means the opinion of the majority as to truth. Most people to-day, as then, accept without question some sort of dualism, usually the dualism of mind and body.

The Problems of the Enlightenment. The area of inquiry was thus very much restricted during this period. Nature lies beyond our ken. God is still more incomprehensible. From the study of nature and God, let us turn to a study of the problems of the inner life.

Yet while the field of study was restricted, the problems within it were multitudinous, and there was an astonishing breadth and universality, a tenacity of everything, a disdainfulness of nothing. Within its own field the Enlightenment sought to systematize and to stand by any idea in spite of all opposition. The imagination took bold flights and, from the standpoint of the inner individual life, tried to transform its world. Overloaded with ballast, it tried to reconcile the irreconcilable and to overlook the brute facts of existence. The problems arise from an age that is self-opinionated, self-tormenting, and subjective.

The problems of this age may be divided into two classes, — utilitarian and critical, — both having reference to the individual man in his relations. These include the problems of psychology, epistemology, sociology, economics, politics, etc. There was, for example, the problem of our knowledge of the external world, of the validity of innate ideas as the basis of knowledge, of the rational basis of religion. Thought was very alert at this time, as is always the case in times of great individualism, and thought could move with great rapidity over the wide range of such subjects.

(*a*) **Utilitarian Problems.** The Enlightenment was curious about the interests, the happiness, and the many powers of the individual. Empirical psychologists and brilliant ethical scholars appeared. How much can man know, and what are the limits and extent of his knowledge? The Rationalists of the Renaissance had accepted without question the mediæval teaching that a group of our ideas is innate and therefore God-given. The Middle Ages had been built up on revealed knowledge. But to the thinkers of the Enlightenment the

most important ideas — yea, the only ideas of service to us — are those derived from experience. We should be happier if we confined ourselves to the facts of every-day life, and did not try to deal with things beyond experience. Let us give metaphysical theories to the Churchman. Empirical psychology thus took the place of metaphysics, and became known as philosophy. It was the favorite science of the time, and the basis of ethics and epistemology. Philosophy thus came out of the school, and became a public utility. It was based, to be sure, upon theological preconceptions, but it was to be put to the service of man. It was to be an instrument of discovery as well as a means of grace. With this psychological incentive great schools of moralists arose, especially in England: studying morality as based on the intellect, on the feelings, on authority, on the association of ideas.

Empirical psychology led to self-inspection, and this is the age when self-inspection was universal. It is the age of the founding of "societies for the observation of man." It is the age of sentimental diary writing. Rousseau wrote his autobiography in France, and it was followed by a flood of autobiographies in Germany. Even memoirs of such scoundrels as Laukhardt were written and read as matters of public interest. Religion, too, took the form of personal experiences and individual conversions; and the church was more interested in the experiences of the saved than in the dogma of salvation. The Methodist movement arose in England and spread over the continent and to America. Individual opinions were more important than conventions; friendships than marriage; societies than corporations. The historical was lost to view because the

personal and particular occupied the foreground. Gibbon said, "All ideas were equally true in the eyes of the people, equally false in the eyes of the philosophers, equally useful in the eyes of the magistrates."

(*b*) **Questions of Criticism.** In the second place, the Enlightenment is a period of criticism and stands in contrast with the constructive Rationalism of the Renaissance. From Locke's invective against innate ideas to Hume's skepticism of the law of cause, from Voltaire's examination of the foundations of religion to Rousseau's polemic against society, the age was one of the criticism of authority. The psychologists, moralists, deists, and sociologists were revolutionists — all striking directly or indirectly at absolute political sovereignty, against the theoretical dogmatism and the ceremonious morality in which the Renaissance was complacent. The revolution began in the realm of the intellect and spread to political society. It was natural that the beginnings should be made in the apparently harmless theoretical examination of the grounds of knowledge and the principles of morality; but the outcome was a general sweep of historical criticism, in which authority and science, the church, the state, and education came under censure. The spirit of man was impatient. Man became indifferent to "learning." In contrast with the Renaissance, this was a time when books were little read, proper names infrequently appeared in writings, authorities were little cited. Let man study himself if he would learn about history and understand the world. Man stands above the scholar, the Christian, the German. He is independent of tradition, and should substitute the useful for the historical. Cosmopolitanism takes the place of patriotism. The Enlight-

enment is practical and yet imaginative. Its criticism aims to strip man of all his artificialities and to find his natural state. Its emphasis is negative and destructive.

The revolt of the Enlightenment against the past appeared in remarkable changes in the political map of Europe. Mediæval Europe was breaking to pieces. The Renaissance had been a period of social absolutism in which the despotic powers of Macchiavelli and Richelieu were typical of its political life. In this period new-comers forced their way into politics and the Enlightenment was marked by the rise of Russia, Prussia, and the American colonies. France and Austria, representing the past, were arrayed against England and Prussia, representing the future of Europe. The conflict between them was that of the old idea of military despotism, non-commerce, and non-toleration against the new spirit of individual freedom. From the Peace of Westphalia (1648) to the Seven Years' War (1756–1763) occurred many conflicts which presaged the breaking down of the old boundaries. The old régime received its death-blow at the hands of Frederick the Great in the Seven Years' War; and a half-century later (1806) the Holy Roman Empire came to an end.

In all countries there were vigorous political movements in support of the rights of the individual. In England the House of Commons began to rise to power and the colonies in America to assert their independence. In France the Bourbon family was fast losing its grip, to be completely overthrown in the French Revolution (1789). The current was entirely in the same direction in Germany. This was the time of Adam Smith and the rise of economic theories. It is a matter of no little significance that this period from the point

of view of philosophy begins with Locke's psychological *Essay* and ends with Kant's *Critique;* and from the point of view of politics it begins with the Revolution of 1688 in England, and ends with a revolution in France and another in the American colonies.

A Comparison of the Enlightenment in England, France, and Germany. The individualism of the Enlightenment expressed itself as a rationalism in Germany, as a sensationalism and deism in France, and as a deism and an empiricism in England. Nevertheless all its phases may be found in each one of these countries. The outcome of the movement in the three countries is, however, very different. In England the Enlightenment passed into a philosophical reaction in the so-called Scottish School; in France, it resulted in a political revolution; in Germany, it merged with a great literary movement and resulted in a creative idealism.

The Many Groups of Philosophers of the Enlightenment. A comparison of the lists of philosophers of this with those of other periods reveals an extraordinary number of names. The Renaissance, for example, shows about half as many names of consequence, although it is about twice as long. The Enlightenment teems with philosophers, for its secular life was permeated with the reflective spirit. The philosophers are also often notable men, whose names are familiar to the modern reader. Nevertheless the number of constructive philosophers was exceedingly few. Only Locke, Berkeley, and Hume can be found whose importance equals that of Bacon, Hobbes, Galileo, Descartes, Spinoza, and Leibnitz. In personal talents and importance to their age the others seem to go in groups or to be part of

the secular spirit. On the whole the history of the Enlightenment is that of social movements, and the philosophers seem to be the exponents of such movements.

Some of these important groups are as follows: —

In England.

1. *Associationalist Psychologists:* Peter Brown (d. 1735), Hartley (1704–1757), Search (1705–1774), Priestley (1733–1804), Tooke (1736–1812), Erasmus Darwin (1731–1802), Thomas Brown (1778–1820).

2. *Moral Philosophers:* Shaftesbury (1671–1713); morality based on intellect, Samuel Clarke (1675–1729); Wollaston (1659–1724); morality based on feeling, Hutcheson (1694–1747); Home (1696–1782); Burke (1730–1797); Ferguson (1724–1816); Adam Smith (1723–1790); morality based on authority, Butler (1692–1752); Paley (1743–1805); ethics based on associational psychology, Bentham (1748–1832); in an isolated ethical position, Mandeville (1670–1733); the Platonist, Price (1723–1791).

3. *The Deists:* Toland (1670–1722), Collins (1676–1729), Tindal (1656–1733), Chubb (1679–1747), Morgan (d. 1743), Bolingbroke (1678–1751).

4. *The Scottish School of Philosophy:* Thomas Reid (1710–1796), Oswald (d. 1793), Beattie (d. 1805), Dugald Stewart (1753–1828).

In France.

1. *Skeptics:* Bayle (1647–1706), Voltaire (1694–1778), Maupertuis (1698–1759), d'Alembert (1717–1783), Buffon (1707–1788), Robinet (1735–1820).

2. *The Sensualists:* La Mettrie (1709–1751), Bonnet (1720–1793), Condillac (1715–1780), Cabanis (1757–1808).

3. *The Encyclopædists:* Diderot (1713–1784), Voltaire, d'Alembert, Rousseau (1712–1778), Turgot, Jaucourt, Duclos, Grimm (1723–1807), Holbach (1723–1789), Helvetius (1715–1771).

4. *The Political Economists and Constitutionalists:* Montesquieu (1689–1755), Quesnay, Turgot, Morelly, Mably.

5. *The Sentimentalist:* Rousseau (1712–1778), the most notable figure of France during the Enlightenment.

6. *Philosophical Revolutionists:* St. Lambert (1716–1803), Volney (1757–1820), Condorcet (1743–1794), Garat (1749–1833).

In Germany.

1. *Thomasius* (1655–1728), the first of the Enlightenment.

2. *The Wolffians:* Wolff (1679–1754), Bilfinger, Knutzen (d. 1751), Gottsched (1700–1766), Baumgarten (1714–1762).

3. *The Geometrical Method and its Opponents:* Hansch, Ploucquet, Crousaz, Rüdiger (1671–1731), Crusius (1712–1775), Budde, Brucker, Tiedemann, Lossius, Platner.

4. *The Psychologists and Related Philosophers:* Kruger, Hentsch, Weiss, Irwing, Moritz (1757–1793), Basedow (1723–1790), Pestalozzi, and Sulzer.

5. *The Independent Philosophers:* Lambert (1728–1777), Tetens (1736–1805).

6. *The Deists:* Schmidt, Semler (1725–1791), Reimarus (1699–1768), Edelmann.

7. *The Pietists:* Spener (1635–1705), Francke (1663–1727), Arnold, Dippel.

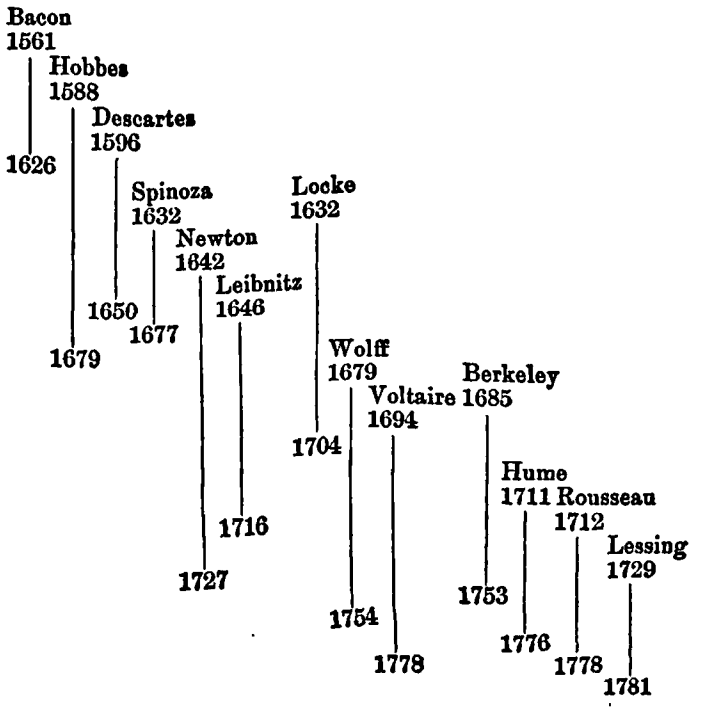
8. *The Popular Philosophers:* Mendelssohn (1729–

1786), Nicolai (1733–1811), Basedow, Abbt, Engel, Feder, Meiners, Garve.

9. *The Writer on Philosophical Religion:* Lessing (1729–1781).

10. *The Writer on Faith Philosophy:* Herder (1744–1803).

The philosophers of greatest importance in this period are given below. To help the reader keep in mind contemporary philosophical influences other names are given with them in a parallel table.



MAP SHOWING THE BIRTHPLACES OF SOME OF THE INFLUENTIAL THINKERS OF THE ENLIGHTENMENT
(1690–1781)

(Note that the names of the philosophers are given in brackets beneath the names of the towns and cities)

CHAPTER VII

JOHN LOCKE

The Enlightenment in Great Britain. The history of the philosophy of Great Britain includes the teachings of Locke, Berkeley, Hume, and the Scottish School. With the exception of the teachings of the reactionary Scottish School, all the important philosophical teachings appear in the first half of the eighteenth century. We need to understand, first, the philosophical position of Locke, who was the father of the Enlightenment. We shall then see how his doctrine developed in three different directions: (1) as Deism, — a rational Christianity, (2) as an associational psychology in ethics, (3) as a theory of knowledge in the philosophies of Berkeley and Hume.

Our discussion of the philosophy of Bacon and Hobbes has been followed by that of Rationalism. It would, however, be a mistake for the reader to infer, as we are about to take up the study of Locke, that a long period of time intervened between Hobbes and Locke. A chronological comparison of their lives shows that they were contemporaries for forty-seven years. Both lived through the reign of Charles I, during the Commonwealth and the Restoration. Hobbes died eleven years before Locke published his only philosophical essay. We must remember, too, that the English empirical philosophers of the Enlightenment were not insulated from the Rationalists of the Continent. On the contrary, there was a lively interchange of ideas. Descartes influenced Hobbes

and Hobbes influenced Spinoza. The influence of Descartes upon Locke was not inconsiderable, and Leibnitz felt the influence of Locke. Berkeley and Leibnitz arrived at idealistic conclusions from independent points of view. Bacon alone seems to stand apart both from his contemporaries and from his immediate followers.

The English Enlightenment was the natural development of the English Renaissance. Locke was the successor of Bacon and Hobbes. On the other hand, the English Enlightenment is similar to what went on in France and Germany. The first half of the English Enlightenment — from 1690 to 1750 — was absorbed in philosophical discussions; during the second half, the period abandoned philosophy, and was engaged entirely in politics. The classes that won in the Revolution of 1688 had little trouble in maintaining their place of power. The peaceful coming of William and Mary gave well-ordered conditions for intellectual development and for a powerful literary movement. The Jacobites were crushed, and there ensued a period of political peace. In the latter half of the century, however, another set of topics came to the front. After 1750 politics superseded philosophy; and whereas the keenest English minds had been employed upon the theoretical "study of mankind" in literature and philosophy, they now became engaged in practical political questions. Political parties developed. The Court was arrayed against the families of the Revolution, the American trouble, and the Wilkite agitations were looming large. England was sucked into the political maelstrom that was involving all Europe. Instead of deistic controversies with the theological orthodoxy, dangerous political questions were appearing. Instead of Hume's *Essay* and Butler's *Ana-*

logy we have Burke's speeches, Adam Smith's *Wealth of Nations*, Junius's *Letters*, and political pamphlets. In the first half of the period Bolingbroke had left politics for philosophy; in the second half Priestley left his laboratory for politics. The great change in English intellectual interests is shown in Hume himself. In 1752 he turned from philosophy, because there was so little interest in the subject, to the writing of his history of England. Theology was paralyzed; deism was no longer ridiculed; orthodoxy slumbered in its victory. The only philosophic tones came from France, where Voltaire, the Encyclopædists, and Rousseau were carrying out a movement that had its origin in England; and, on the other hand, from Scotland and its reactionary school. But the political movement always remained political in England, because its institutions were not inflexible and because the English people are by nature constitutional. In England there has never been a revolution, in the true sense, but England's progress has always been controlled by tradition. Even the revolution in the English colonies in America was caused by an abridgment of constitutional rights, and not by political theory, although the formal Declaration of Independence was framed under the influence of French philosophers.

John Locke, Life and Writings (1632–1704).* The life of Locke falls into four periods.

1. *Student Life* (1632–1666). Locke passed his first fourteen years at home, which were the troublesome years of the Civil War. The next six years were spent at the Westminster School in London. The last four-

* Read Rand, *Modern Classical Philosophers*, pp. 215–217, 248–262; Eucken, *Problem of Human Life*, pp. 380–388.

teen years of this period were spent, first as student and then as lecturer in Oxford. He took his Oxford degrees in 1660, the year of the Restoration and the year in which the British Royal Society was founded at Oxford. His dislike for the classics, which was begun at the Westminster School, was confirmed by his Oxford studies. Consequently, during the years of his perfunctory lecturing at Oxford (1660–1666), his main interest was in physics. He was engaged in chemical, meteorological, and especially medical observations. He was also engaged in an amateur medical practice, in partnership with an old physician.

The first turning point in his life came in 1666, when he was called to attend the first Lord Shaftesbury, who had fallen ill at Oxford. This accidental meeting was the beginning of a lasting friendship with the Shaftesbury family, sustained by their common love for political, religious, and intellectual liberty. The first Lord Shaftesbury was the most notable statesman in the reign of Charles II; the third Lord Shaftesbury was the greatest of English ethical scholars. Locke was the trusted friend and beneficiary of the first Lord Shaftesbury, the tutor of the second, and influenced, more than any one else, the ethical productions of the third. Locke wrote some notes in this period on the Roman Commonwealth, an essay on toleration, and made records of physical observations.

2. *As Politician* (1666–1683). During these seventeen years Locke's outward fortunes were intimately connected with the political career of Shaftesbury. He held public office. He was made a member of the Royal Society in 1668. The winter of 1670–1671 was important for his intellectual fortunes and marks another

turning point in his life. It was then that he started the inquiry that led to his famous *Essay*.[1] The *Essay* was in the process of development during the next nineteen years. He passed four years in retirement and in study in France (1675–1679). He also at this time first conceived his *Essays on Government*. Shaftesbury fled to Holland in November, 1682, and Locke a few months later followed him.

3. *As Philosophical Author* (1683–1691). The year 1689 divides this period into two important parts. The first part (1683–1689) is not only the period of his exile in Holland, but it is the time in which he is composing and completing his three most important literary works, — *Essay on the Human Understanding*, the two *Treatises on Government*, the three *Epistles on Tolerance*. During the second part (1689–1691) he published these, which was the time immediately following his return to England. Newton's *Principia* was published in 1687, and Locke's *Essay* in 1690 — the one the foundation of modern physical science, the other the beginning of modern psychology. The appearance of these two works together with the Revolution in 1688 makes this point of time an important one in the history of the world.

4. *As Controversialist* (1691–1704). Locke then began to write upon almost every conceivable subject, — the coining of silver money, the raising of the value of money, the culture of olives, etc. He was also very busy in defending his philosophy against attacks. For him, until 1700 the period was one of controversy. At that time he retired from all activity, and after four years of failing health died in 1704. His period of produc-

[1] See *Essay*, introductory epistle to the reader.

tion was confined to the eleven years between 1689 and 1700.

The Sources of Locke's Thought. 1. *His Puritan Ancestry.* The ancestry of Locke is little known, and not much that appears in his personality can be explained by it. Both his father and mother were Puritans, and he seems to have inherited the severe piety, prudent, self-reliant industry, and love of liberty, that were common in English Puritan families of the middle class in the seventeenth century. During the first fourteen years he was schooled by his parents.

2. *His Training in Tolerance.* If Locke inherited in the least degree any temper of intolerance from his Puritan ancestry it entirely disappeared with his experiences before and during his life at the University of Oxford. In 1646, at the Westminster School, his mind revolted at the cruel intolerance on both sides in the events just succeeding the Civil War. He also rebelled at the stern scholastic training which he received. These negative influences were supplemented by positive incentives to freedom and toleration during his university life. John Owen was the liberal Vice-Chancellor of Oxford at that time, and the university granted freedom of thought to all Protestants. Locke felt Owen's influence throughout his whole life. The fact that Locke's intimate friend at Oxford was Professor Pococke, the most outspoken Royalist in the university, shows that whatever Puritanism there was in Locke's nature had been ameliorated. Tolerance and liberty of opinion became now the key-note in the life of John Locke. "A gentle disposition, great love for his friends, an honest seeking after truth, and a firm faith in the importance of personal and political freedom are the traits most

remarkable in Locke as we know him from his books and letters." His toleration was not of the same sort as that of his contemporary Leibnitz. Leibnitz sought to reconcile discordant elements by combining them into a new dogmatic theory; Locke neglected disagreements, sought no perfect harmony, but pointed out a *via media* that any individual might take. Leibnitz set forth a metaphysical system; Locke gave a practical method. He had great directness, and was a man of honesty of thought. Not being a partisan he had no side to defend; and he was not a partisan because philosophy was not his trade. Philosophy was to Locke the accomplishment of a gentleman who was interested in the puzzles of life. His diction is for ordinary people; it is simple and expressed in short Anglo-Saxon words. He shows no logic of thought; and while any sentence is admirable, the paragraph and the page are dull. His *Essay* is a chaos of plain truths, only here and there illuminated by imagination. He shows no poetic power, and the world in which he lived never fired his imagination. He studied the human mind as he would read the thermometer. To our fathers his *Essay* was a philosophical Bible. To us the *Essay* stands, not like a completely planned building, but like an enlarged cottage, very habitable, but making no single impression.

3. *The Scientific Influence.* As a fellow-countryman of Ockam and the two Bacons, Locke shows the same anti-mystical and positivist tendencies. He was a thorough Englishman in taste and temperament. When the "new philosophy" was finding its way into the Oxford circle, he was one of the first to welcome it. It came to the University through books; the lecturers were still true to Aristotle. Descartes, Hobbes, and

Bacon were widely read, as was also Gassendi's exposition of Epicurus. Locke himself writes concerning the influence of Descartes upon him. He gave up all thought of becoming a clergyman; and his personal friendship for Bayle, a famous chemist, and for Sydenham, a no less famous physician, interested him in the empirical method as they applied it to chemistry and therapeutics. He owed his philosophical awakening to Descartes and the Port Royal logic. The lucidity of Descartes came to him as an inspiration of intellectual liberty; although he afterwards used the principles that Descartes had taught him to controvert his teacher's doctrine.

During the first period of Locke's life (1632–1666) he was nothing more than a student of medicine and a meteorological observer. He was the retired scholar who led so placid a life that it portended nothing noteworthy. He was a creditable scholar and teacher, but his life was negative in character. He had passed through stirring times, and they did not stir him.

4. *The Political Influence.* Locke's interest in politics began when he was thirty-four years old — when he met Lord Ashley at Oxford. For fifteen years he shared the home and fortune of this most remarkable man of affairs in the reign of Charles II. This Lord Ashley (Earl of Shaftesbury) fled to Holland in 1682, and died there the next year. After the death of his patron Locke left England for exile in Holland until 1689, when he returned to England with William and Mary. In Holland he found a brilliant company, exiled from all countries; and he formed an intimate friendship with Limborch, the leader of liberal theology in Holland. Some of the time he lived with a Quaker.

Locke's friendship with Shaftesbury and his residence in Holland confirmed him in his belief in political liberty. So when William entered England and needed literary justification for the Revolution, he got it in Locke's two *Treatises on Government*. Locke thus became the philosophical defender and intellectual representative of the Revolution that now after fifty years had reached its culmination.

Summary. On the whole, the inherited Puritanism of Locke was easily modified not only by his own moderate disposition, but also by his scientific interests and by his large political experiences. He naturally grew to be the apostle of the *via media* between traditionalism and empiricism. He published practically nothing before he was sixty years old. After his return from exile his principal works appeared in swift succession. Two accidents formed turning-points in his life. His accidental meeting with Shaftesbury in 1666 turned him to politics; and secondly, at an informal meeting of friends in the winter of 1670–1671 the question about the nature of sensations was accidentally raised, out of which grew his great *Essay*. His life was primarily one of affairs and of large acquaintance with men and things. To him life was the first thing, his interest in politics came second, and his philosophy third. That his ideas should have been the basis of extreme philosophical and political beliefs on the Continent is natural enough when one remembers the perils of misinterpretation to the man who preaches the doctrine of the *via media*.

The Purpose of Locke. In the historical perspective of two centuries we to-day see Locke in his *Essay on the Human Understanding* delivering the inaugural

address of the eighteenth century. He is making the first formal declaration of the intellectual rights of the individual in a lengthy, dry, and erudite psychological dissertation. Of course he never knew the historical importance of his own work. It grew out of the need of the hour. He would have been astonished to find himself the spokesman of the century of French Encyclopædists, materialists, and revolutionists, of English deists, of German Illuminati, of Hume, and of Voltaire. He had in mind to answer the restrictions of the high churchman on the one hand, and the arrogant claims of the atheists on the other, as to the power of the human intellect. He states that his design is to "inquire into the original certainty and extent of human knowledge." In this declaration Locke foreshadows Kant, but he falls short of the insight of Kant. For Locke speaks for the spirit of the eighteenth and not the nineteenth century, and (1) he must keep within the range of concrete facts; (2) he must state only what can be stated clearly; and (3) he must be practical. It was, however, in its larger meaning a declaration of human freedom. Locke shows what limitations the human intellect has, what it can and what it cannot know. When the Enlightenment got momentum, it forgot the limitations to knowledge that the sober Locke had set down, and read in his words only a declaration of license. The *Essay* differs from any previous modern philosophical writing. Man and not the universe is the subject. For the first time we find an examination of the laws of mind, and not of the laws of the universe.

But it is the *via media* for which Locke stands, and not the lawless excesses of the eighteenth century. The human reason is not all-knowing — cannot solve all

problems, is not endowed with divine ideas; on the other hand, the human reason is not merely a string of sensations. The human reason is just this: it is *human*. It stands midway between divine intuition and animal sensation. Man is free, but free under his own limitations. "If by this inquiry it may be of use to prevail with the busy mind of man to be more cautious in meddling with things beyond its comprehension — we should then not be so forward, out of affection for universal knowledge, to perplex ourselves and others with disputes about things, to which our understandings are not suited and of which we have not any notions at all." Human freedom stands between the absolute freedom of God and the absolute necessity of the animal. Human freedom lies within the limits and bounds of human ideas — the *via media;* and analysis of those ideas will show what those limits and bounds are. There can be no knowledge without ideas. Some ideas may be erroneous and out of all relation to reality. On the other hand, there may be ideas to which no experiences fit. Intellectual freedom consists in having not isolated ideas, but ideas in their relations, that is, in the form of judgments. Locke was moved in making his analysis of ideas by a general moral purpose to correct the faults and fallacies in mankind and in himself. "Man's faculties were given him to procure the happiness which this world is capable of," says Locke, and it might have been Bacon who had said it. The search for the *via media* is justified by its practical and utilitarian ends. The *via media* is the way of freedom.

Two Sides of Locke's Philosophy. The search for the *via media* is an attempt to find "the limits and extent of human knowledge." This involved Locke in a

discrimination as to what should be accepted and what rejected of the past. It gives his philosophy a positive and a negative aspect. In brief, on its negative side he makes a show of rejecting the entire past by rejecting all innate ideas, but really he inconsistently accepted from the past its conception of substance and of individuality. On its positive side he builds up from experience a theory of knowledge which he divides into intuitive, demonstrative, and probable. That is to say, while Locke affirms that all our knowledge must be derived from experience, it never occurs to him to doubt the traditional Cartesian theory of the existence of God, man, and matter.

(*a*) **The Negative Side — Locke and Scholasticism.** Locke issued an avowed defiance to scholasticism in the introduction of his *Essay*. Of the four books into which the *Essay* is divided, the first was composed last and added as an introductory declaration of independence. If it had been the only part ever written, the anarchism of the eighteenth century would have been right in finding its justification in the *Essay*. To a modern mind this first book looks harmless enough, but in Locke's time it had a deep sociological and political meaning. It expresses his practical moral defiance of traditional mediævalism. "There exist no innate ideas," says Locke. Innate ideas mean to him the tyranny of tradition — unexamined and unsubstantiated beliefs, conceptions unverified by fact. They stand for church dogma imposed upon the unthinking masses, the absolutism of monarchy and the divine right of kings, the inherited superstitions about nature. Spinoza had deduced his entire philosophy from the innate idea of substance; Descartes had found at least three innate ideas;

Leibnitz believed all ideas innate. Locke pleads for the personal right to examine all ideas. Locke's critics have claimed that no philosopher ever maintained the existence of innate ideas in the sense in which Locke attacked them. Locke was aiming at something more vulnerable than innate ideas themselves — he was attacking the mediæval habit of the individual who takes a thing as true because the thing has the weight of traditional authority.

(*b*) **The Positive Side — The New Psychology and Epistemology.** If inherited ideas have no weight for Locke, he was bound to show the kind of ideas upon which we can rely. The mind enters upon life with no stock of ideas in trade; how do they arise? The logical outcome of Locke's disclaimer of scholastic psychology obliged him to construct a new psychology and theory of knowledge. He must offer a psychology as a constructive programme for the individualism of the Enlightenment. In his second book Locke states the positive side of his doctrine by saying that the mind is like a white paper without any original markings; that it gets its markings from the impressions made upon it. Thus to deny innate ideas and to affirm that all ideas are empirically aroused, are the negative and positive sides of the same doctrine of individualism. They are two ways of saying that the mind of the individual is free to judge for itself of the truth or falseness of its experiences.

In his denial of the existence of innate ideas, in his use of the formula that "nothing is in the intellect that has not been first in the sense," or in his employment of the figure of the "white piece of paper," Locke does not intend to state anything further than that the mind

is free. He merely means that the individual starts without trammels and prejudices. He does not mean that the mind is completely passive and at the mercy of its environment, as his French followers interpreted him. Locke is a sensationalist, but he does not belong to that class who believe that our mental states are merely translated sensations, and that the mind itself is merely passive. He believes that the mind does not create its ideas, but that they are presented to it. The mind has original powers upon which it can reflect. The mind can operate with its ideas and make them into compounds. Thus one must read Locke's *Essay* to the end to get his double point of view. In the second and third books he frequently discusses the contents of the mind as if the mind were passive, in the manner of modern psychologists. In the fourth book he develops an epistemology on the assumption that the mind is active and free.

Locke's Psychology. The second and third books of the *Essay* are a discussion of the empirical sources of our ideas. One notes the Cartesian dualism of mind and matter in the background. All ideas have their source either externally in the impressions upon the bodily senses, or internally in the operations of the mind itself. The sources of ideas are either sensations or reflections, or, as Locke calls them, "outer and inner perceptions." Locke also calls them "simple ideas," being the units out of which the complex ideas are constructed. We understand easily enough what Locke means by sensations, but "reflections" is a word peculiar to him, which has not been taken up by philosophy. He means by "reflections" a consciousness of the machinery of the mind. We are, that is to say, conscious

of our willing, loving, remembering, etc. As to the order of their appearance in the mind, the sensations are prior to the reflections and are the occasion for the appearance of the reflections. The reflections are not the process of transmitting the sensations, but they are the later and mechanical transmutation of the sensations. It is important to note that throughout Locke's psychological analysis, he regards the mind as passive, even with respect to the ideas of reflection. The reflections, as faculties of the mind, are dependent on the sensations, and both sensations and reflections make impressions upon a passive mind.

These "simple" ideas come into the crucible of the mind and form "complex" ideas of various sorts. There are three general classes of these complex ideas: substances, modes, and relations. The construction of "complex ideas" out of "simple ideas" and the objects to which the complex ideas refer receive a great variety of illustration at Locke's hands, but the details of his lengthy discussion need not detain us. He is very painstaking; he shows hard common sense; but he is deficient in logical classification and he often betrays much indecision. His *Essay* is of encyclopædic character in its derivation of all common notions from "simple ideas." The laws of association form the chemistry by which he welds the "simple ideas" together.

Thus far Locke is empirical and consistent. However, the dualistic background of the thought of his age makes him deviate from his avowed empiricism. Besides the clear and simple ideas of sensation and reflection Locke introduces the idea of the Self. What is the idea of Self? It is not a sensation nor a reflection. It is not a complex idea, derived from sensations and re-

flections. "It is an internal, infallible perception that we are." It is an accompaniment of the processes of thought. It stands beside the ideas, which are empirically derived, as an unexplained remainder. The result of Locke's psychological analysis is therefore that the inner world of the mind consists of the combination of the simple ideas of sensation and reflection plus the unexplained idea of the Self.

Locke's Theory of Knowledge. Although Locke says that the purpose of his *Essay* is to show the limits and extent of human knowledge, he does not reach this until the last book. The first three books form a long introduction to the fourth book and his real theme. Here for the first time he treats the mind as active; and here for the first time in the history of thought the attempt is made to show what questions man can answer with certainty, what with probability, and what are beyond man's knowledge.

All the difficulties in the assumptions of the Enlightenment come out in Locke's treatment of his main theme. Locke defines knowledge as the "perception of the agreement or disagreement of our ideas," and yet he says that knowledge is real only as ideas agree with things. That is to say, Locke had assumed (in Book II of the *Essay*) the existence of the material substance of things of the outer world, just as he assumed the existence of the spiritual Self-substance of the inner world. What is the nature of the outer material substance? Locke hesitates, and the best he can answer is, "It is the unknown support and cause of the union of several distinct, simple ideas." Substance, to Locke, is a word for something unknown. But does the mind know nothing about substance? What information do our ideas

convey to us of substance? We have this knowledge: we know the *primary* or constant, unchangeable qualities of substances, and the *secondary* or variable qualities of substances. The *primary* qualities of bodies are the same as their effects in us, such as the extension of bodies, their solidity, movement and rest, duration and position in time. The *secondary* "are nothing in the objects themselves but powers to produce various sensations in us by their primary qualities." Secondary qualities are sounds, colors, etc. In this confused statement it would seem that substance stands as merely the nominal support of the *primary* qualities, and the *primary* qualities are the cause of the *secondary* qualities.

Thus the individual stands forth free in the development of his ideas, but he is an individual circumscribed by his dualistic world. He belongs to the world of an unexplained spiritual substance on the one hand, and he is surrounded by a world of an unknown material substance on the other. There are three kinds of knowledge: intuitive, demonstrative, and probable. Locke says that the individual is intuitively certain of his own ideas. The individual has also demonstrative knowledge — he can reason logically and mathematically. But Locke's real problem does not lie with intuitive and demonstrative knowledge. The question that concerned him was rather, What is the character of our knowledge of the external world? The individual in the Enlightenment lived in a spiritual independence of matter, yet he had a feeling of uncertainty about his hold upon a world of matter so different from himself. It was a world foreign to his spiritual essence. With the deepening of the mind within itself and with its growing independence, the equally independent material world

grew more difficult and distant. Locke feels this difficulty. How can man know this external world? How can the individual, with all his freedom, bring the external world under his control?

Besides the certainty of intuitive and demonstrative knowledge, there is a third kind according to Locke. This is the probable knowledge of the nature world. We are certain of our sensations, but we are not certain of what our sensations report. The highest degree which our knowledge of the external world can attain is probability, or an inference from many sources. Such knowledge is mere opinion, which supplements certain knowledge and operates in the large field of our daily existence. The spiritual individual stands in a kind of twilight region with the dull wall of the material world of probable existence looming up before him, the outlines of which he can barely discern. On either side of this twilight existence lies the broad daylight of intuitive and demonstrative knowledge, and around it all the absolute darkness of ignorance. Our knowledge is much less than our ignorance because our knowledge is limited to our ideas and their combinations.

Locke's Practical Philosophy. Locke pursued the *via media* in his discussion of the practical problems that were at that time of burning importance in English society. He always kept in mind the spiritual man who is circumscribed by his own limitations. Morally, religiously, and politically the individual has to conform to the conditions in which he lives. But morality, religion, and government cannot get their authority from ideas inborn in the mind. All are the outgrowths of experience. The moral law, for example, is a law of nature, although at the same time it is a law of God. It arises

from experience, and at the same time it has its root in God. To obey it is to be happy, to disobey it is to be unhappy. The revelation of religion, too, may transcend experience, but it must not contradict experience. In both religion and morality the individual must be the final judge, for he is the arbiter of his own happiness. Individual happiness is of more value than all else. Religious toleration is therefore one of the first principles of government, and between the church and the state there should be no conflict.

Locke's political philosophy is along the same *via media*. In his *Treatises on Government* he seeks to make good the title of King William to the British throne. He justifies the right of the individual to revolt under certain conditions. Political government is not a sacred innate idea, but has arisen out of experience as conducive to the happiness of man. The individuals and the government make a contract to serve each other. When either violates the contract, the State is at an end. To the advocates of the divine rights of kings, like Filmer, political law antedated "nature"; to Hobbes, law came after "nature"; to Locke, law is "nature." To Filmer "nature" was a golden age; to Hobbes it was a shocking state to be got rid of; to Locke "nature" is harmony. Thus according to Locke the individual has through his experiences constructed his morality, his religion, and his government because they are conducive to his happiness, and at the same time they have their ground in the "nature" of things. The individual stands free among them, the central figure in the world.

The Influence of Locke. The philosophy of Locke became the fountain-head of the many divergent schools

of thought of the Enlightenment. His *Essay* did not contain anything fundamentally new, and its presentation has little originality; but it voiced the thought of the eighteenth century so easily, and with such skillful avoidance of pitfalls, that it made Locke the most widely read and the most influential philosopher of his time. Four separate movements had their source in him: (1) From his theory of knowledge, in which the emphasis is laid upon the mind as active, came the empirical idealism of Berkeley and Hume; (2) from his psychological analysis in the second and third books of the *Essay*, in which the mind is regarded as passive, came the sensationalism of the French; (3) from his theory of religion came Deism; (4) from his associationalistic ethics came the utilitarian ethical theories of the English moralists. The most constructive followers of Locke were Berkeley and Hume. The others may be called the lesser Lockian schools; for although they may have exercised a much greater influence upon their own time, they were nevertheless only partial interpreters of Locke. We shall deal briefly with Deism and Ethics in England, next consider at length the philosophies of Berkeley and Hume, and then present in a summary but articulate way the development of the Enlightenment in France and Germany.

The English Deists. We have seen how Rationalism, especially in the case of Descartes, tried at the beginning to reconstruct theology without breaking with established dogma. Gradually, however, rationalism and revealed religion showed signs of divorce. Some of the rationalists came to take the stand that if reason can understand the nature of God, revelation is either incredible or superfluous. The revealed religions differ.

The god of the mediæval people is not the same as the god of the heathen nor as the Jehovah of the Jews. There are many religions and many sects in each religion. There must be to them all a common basis, which is the true religion. This was the creed of Deism or Natural Religion. Positive religions are only the corruptions of natural religion, or the religion of reason. Deism sought to separate religion from special revelations, which were looked upon as the irrational elements of religion. Bacon and Descartes had freed natural science from church dogma; Hobbes had freed psychology from the same dogma; Grotius had freed the conception of law from dogma. The Deists would free religion from dogma.

Deism was founded on three principles; (1) the origin and truth of religion may be scientifically investigated; (2) the origin of religion is the conscience; (3) positive religions are degenerate forms of natural religion. The tendency of the Enlightenment was deistical, and the movement was powerful in England, France, and Germany. Deism was quite consistent with the central principle of this period — the self-sufficiency of the individual.

In England the first deist was Herbert of Cherbury (1581–1648), with his "five fundamental propositions of religion." The body of English deists, however, got their cue from Locke's identification of the moral law with the law of nature; but Locke himself was not a deist. The literature of deism coincides for the most part with the English moral philosophy of the period, but usually the group of English deists is supposed to include only Toland, Chubb, Tindal, Collins, Morgan, and Bolingbroke. These men lived in the first half of the Enlight-

enment. They were much despised by the scholars of the time as being mere dabblers in letters. "They were but a ragged regiment whose whole ammunition of learning was a trifle when compared with the abundant stores of a single light of orthodoxy; whilst in speculative ability they were children by the side of their antagonists."*

The English deists passed from view at the end of the first half of the eighteenth century, crushed by the weight of the attack upon them. The more powerful orthodoxy, with its greater talent, was itself rationalistic, and could beat them on their own ground. The churchmen showed that the objections against the God of revelation would be equally effective against the deistic God of nature. The classic argument along this line against the deists is Bishop Butler's *Analogy of Religion.* The battle was unequal, and the character of the books published during the controversy reveals the inequality of the contest. The deistic publications were small and shabby octavos, and were published anonymously. The orthodox publications were solid octavos and quartos in handsome bindings, with the credentials of powerful signatures. Even if the orthodoxy had not employed the arm of the law against the deists, the deists would have been broken by the intellectual force against them.

The English Moralists. Just as the motive of the deists was to free religion from the authority of theology, so the motive of the celebrated group of English moralists of the Enlightenment was to find a basis for morality outside of church dogma. Many of the English

* Read Leslie Stephen, *History of English Thought*, vol. i, pp. 86–88.

moralists were also deists in belief. Their number is legion, as the list given below will show. The greatest among them was Shaftesbury.

The school began with Hobbes and received momentum from the associational psychology of Locke. All the members of this group sought to find an ultimate basis for morality — some seeking it with Locke in experience, others in innate ideas. Yet the starting-point with each of these moralists seems to be Hobbes and his selfish ethics, for nearly all ethical scholars have his ethics in mind, either to attack or to defend. For many years Hobbes was regarded by ethical scholars either as an evil spirit or as an inspired genius. In any case, his influence was felt in ethical discussion for a long time.

Chronological Table of the English Moralists.

	1500	1600	1700	1800
Hobbes	88	79		
Cudworth		17 88		
Locke		32	04	
Cumberland		32	18	
Wollaston		59	24	
Mandeville		70	33	
Shaftesbury		71	13	
Clarke		75	29	
Berkeley		85	53	
Pope		88	44	
Butler		92	52	
Hutcheson		94	47	
Edwards			03 58	
Hartley			05 57	
Tucker			05 74	
Reid			10 96	
Hume			11 76	
Smith			23 90	
Price			23 91	
Paley			43	05
Bentham			47	32
Stewart			53	28
Whewell			95	66
Mill				06 73

CHAPTER VIII

BERKELEY AND HUME

The Life and Writings of George Berkeley (1685–1753). In Bishop Berkeley we have the finest type of Irish mind. In his brilliant mental powers and idealistic theory he reminds us of that wonderful Irish scholar of the Middle Ages, John Scotus Erigena. Berkeley was acutely critical, and yet he possessed a childlike religious faith. He combined an insatiable longing for knowledge with an ardent missionary zeal. "Berkeley was a born child of Plato, a lineal descendant of a race whose origin is afar off and is divine."* He was one of those exceptional minds that begin to bring forth their intellectual offspring when they are young. Berkeley began to publish at the age of twenty-four, Hume at twenty-eight, Descartes at forty-one, Locke at fifty-eight.

We shall divide the life of Berkeley into three periods.

1. *His Early Training* (1685–1707). Nothing is known of Berkeley's early years, except that he was born in Kilkenny, Ireland. He was educated at the Eton of Ireland, the Kilkenny school, where Swift had been a pupil; and it is known that one of Berkeley's schoolmates was Thomas Prior. Berkeley entered Trinity College, Dublin, at fifteen, and graduated at nineteen. Scholasticism was still influential at Trinity, but new sciences, such as botany, chemistry, and anatomy,

* Read Royce, *Spirit of Modern Philosophy*, p. 86; Rand, *Modern Classical Philosophers*, pp. 263–277.

had been added to the curriculum. There, too, the young Berkeley found that Locke's *Essay* was much discussed, and that Newton, Boyle, Malebranche, Descartes, and Leibnitz were widely read. From this early date Berkeley began to keep a book of his own philosophical reflections, calling it his *Commonplace Book*. From it and from his philosophy it would appear that Locke and Malebranche were the most powerful philosophical influences upon him.

2. *As Author* (1707–1721).

Berkeley remained at Dublin as tutor and fellow five years after his graduation. In 1709 he was ordained deacon in the English church. He published two mathematical tracts in 1707, his *Theory of Vision* in 1709, his *Principles of Human Knowledge* in 1710. The *Theory of Vision* and the *Principles of Human Knowledge* were practically a statement of his philosophy. They have been compared thus: the *Theory of Vision* teaches that "all that we see is our sensation"; the *Principles of Human Knowledge* teaches that "all that exists is our knowledge." Berkeley then went to London, where he was admitted to the court of Queen Anne and also to the circle that included Steele, Swift, Addison, and Pope. Berkeley showed himself humble, wise, considerate, and unselfish, and although he was shocked at the court life, he on his side charmed every one whom he met. He wanted to make his idealism better understood, and so he published it in the form of a dialogue between a realist and an idealist. This publication was called *Three Dialogues between Hylas and Philonous* (1713). He then made two journeys to the Continent — 1713–1714 and 1716–1720 — and spent much of the time in Italy, where he absorbed

its literature. The South Sea swindle turned him to economics, and in 1721 he published an *Essay toward Preventing the Ruin of Great Britain.*

3. *As Priest and Missionary* (1721–1753).

Berkeley was appointed Dean of Derry in 1721 at a salary of £1100. Although he threw himself into his work with his accustomed zeal, there had already appeared in his mind the conception of an ideal society, where church and state would be united. He was disgusted with the worn-out European society, and wanted to remove the youth to a colony where there would be no temptations. He raised a large sum of money for this purpose, and obtained the promise of a grant from the government of £20,000, gave up his deanery, and sailed for America. He intended to settle in Bermuda and there to found an ideal State, which should also be a centre for the conversion of the American Indians to Christianity. The promised grant from the English government did not come, and Berkeley got no farther than Newport, R. I., where he lived three years. While at Newport he wrote *Alciphron, the Minute Philosopher*, and published it in England in 1732. The records of Trinity Church in Newport show that he preached there many Sundays. He gave several books to Harvard and Yale Colleges. At Newport he was visited by Samuel Johnson, an Episcopal missionary, who afterwards became president of King's College in New York. Johnson was converted to Berkeley's idealism, and through Johnson the doctrine was received by Jonathan Edwards, his pupil.

From 1734 to 1752 Berkeley was Bishop of Cloyne. He was devoted to missionary work among the poor, and many of his people being afflicted with an epidemic

of influenza, he treated them effectively with tar-water — a remedy he had learned from the Indians. He published *Siris*, an essay on the philosophical virtues of tar-water, in 1744. In 1752 he went to Oxford to live, and in 1753 he died.

The Influences upon the Thought of Berkeley. Berkeley's philosophy shows little development after his first publications. With the exception of *Siris*, which contains much Platonic idealism, the later works of Berkeley are scarcely more than an elaboration of his early thought in the *Theory of Vision* and the *Principles of Human Nature*. We should infer, therefore, that the only philosophical influences upon Berkeley were the original springs at which he drank as a youth. Moreover, he always speaks with the dogmatic certainty of one who has drawn his material from but few sources. Never does he exhibit the indecision of a man who is embarrassed by many points of view. The two chief influences upon him were Locke and Malebranche. The influence of Locke was partly of the nature of a reaction: Berkeley accepted Locke's psychological analysis, but reacted from Locke's "common sense" dualism as early as the time of his student life at Trinity. Malebranche, with his theory of "occasional causes," reinforced his opinion along the line that his reaction took. But Berkeley's own incisive genius had a relatively greater influence in dictating the course of his philosophy than is usually the case. His mind was precocious, fertile, and continuously versatile. Furthermore, Berkeley's simple religious nature seems to have been an important factor in determining his intellectual belief. His peculiar idealism could take root only in a mind inspired by faith.

The Purpose of Berkeley. The life and teaching of Berkeley were dedicated to the true interests of religion. He may be called the religious Enlightener. He would not, like the deists, strip religion bare of dogma, but he would unlimber dogma and rational philosophy so that they would be of service to religion. *His purpose was to free scholasticism on the one hand, and rationalism on the other, from abstractions and obscure terms, and thereby bring about a union of faith and knowledge.* Berkeley looked upon himself as a crusader who would retake the Holy Land for the spiritual individual.

We have remarked that one of the presuppositions of this period of the Enlightenment is the independence of the individual. The individual around which Berkeley's philosophy centres is the spiritual individual, and is therefore unique even for this period. Such an individual is superior to his environment because he belongs not to a material world, but to a community of religious beings who can talk and walk with God. The English Enlightenment passed from Locke to Berkeley. The inner life came into complete ascendency and the spiritual individual emerged. From the Lockian philosophy, with its many contradictory motives, there appeared the audacious one-sided philosophy of Berkeley, with its proclamation of the reign of spirituality. It stood in marked contrast with the development of the Enlightenment in France—a development of materialism and material atoms. The spectral although stubborn boundaries of the unknowable material world, which Locke supposed to shut around the powers of the human intellect, crumbled before the hand of Berkeley.

The casual reader of the history of thought is, however, often disconcerted at the appearance of such a philosophy as Berkeley's in this period of empiricism, and especially as the immediate follower of Locke. The English school is called the empirical school, and yet Berkeley is also called an idealist. But we must remember that empiricism and idealism are not antithetical. Empiricism refers to the source of our knowledge; it means that all our knowledge is primarily derived from sense-perceptions. These sense-perceptions may be of two kinds: they may be (1) psychological facts, or (2) material facts. Berkeley was, like Locke and Hume, an empiricist of the first class; and yet because he denied the independent existence of material facts, he was also an idealist. He was an empirical idealist, just as the French philosophers of the Enlightenment were empirical materialists. The critic may find that Berkeley is not a consistent empiricist, to be sure, but neither was Locke. Berkeley started out by affirming the testimony of experience against scholastic speculation and abstraction; yet all along he assumed the scholastic conception of mind. Nevertheless, this assumption of the individual makes Berkeley a true child of the Enlightenment.[1]

Berkeley's General Relation to Locke and Hume. The growth of this English school from Locke to Hume is not difficult to understand or to remember. It is not so much a page in the history of metaphysics (the nature of reality) as in epistemology (the theory of

[1] Berkeley and Hume were really also dualists, like Locke and all other Enlighteners. The ideas were substituted by them for material substances. As objects of knowledge the ideas were antithetical to the knowing process. Hume tried to overcome this dualism, but he was not successful in his attempt.

knowledge). Locke asks, What can we know? And he replies to his own question, that we can know our "ideas." At the same time he assumes the existence of a spiritual substance on the one side, and a material substance on the other. Neither of these is an idea, in the sense that it is an object of knowledge. The advance of Berkeley from Locke and of Hume from Berkeley was one of cancellation. Berkeley cancelled the material substance, because the material substance is not an idea. Hume then consistently enough asked, Why not for the same reason cancel the spiritual substance? The spiritual substance is not an idea or object of knowledge. We have no more right to assume it than the material substance. The only things we know to exist are our ideas. The development of the English school may be briefly put as follows:—

Locke,	Spiritual substance — ideas — material substance.	
Berkeley,	Spiritual substance — ideas	
Hume,		ideas.

Hume is Locke made logically consistent. Berkeley went only halfway. Hume among these three was the only self-consistent empiricist. On the assumption that all knowledge is derived from sense-perception the history of the English empirical school was a history of the restriction of knowledge.

Berkeley's Points of Agreement with Locke. Berkeley starts from Locke's psychological analysis as the basis of his own theory. The purely scientific aspect of the contents of mind as classified by Locke does not call for particular criticism from him. Logical classification does not seem to concern him very much, and while he accepts Locke's analysis, he often calls Locke's classes

by other names. He commits himself to Locke's psychological empiricism in the first sentence in his *Principles:* "It is evident to any one who takes a survey of the objects of knowledge, that they are either ideas actually imprinted on the senses; or else such as are perceived by attending to the passions and operations of the mind; or, lastly, ideas formed by the help of memory and imagination — either compounding, dividing, or barely representing those originally perceived in the aforesaid ways." Our knowledge, therefore, deals only with ideas. There are the simple ideas of sensation and reflection, and ideas compounded from these.

Besides accepting the psychological analysis of Locke, Berkeley also adopts without question the assumption common to Locke and all the philosophers of the Enlightenment, — the assumption of the independence of the individual soul. "But besides all the endless variety of ideas or objects of knowledge, there is likewise something that knows or perceives them — what I call mind, spirit, soul, or self. By which I do not denote any one of my ideas, but a thing entirely distinct from them, wherein they exist, or, which is the same thing, whereby they are perceived."

Berkeley, therefore, (1) agrees with Locke that all knowledge is derived from sense-perception, *i. e.* he agrees with Locke's empirical psychology, and (2) he also agrees with one of Locke's assumptions, viz., that the spiritual substances exist.

The Negative Side of Berkeley's Philosophy. We have now pointed out Berkeley's general relation to Locke and Hume, and more in particular his agreements with Locke. We are now prepared to examine the teaching of Berkeley by itself.

Berkeley was obliged to devote a good deal of time to the negative side of his philosophy. Just as Locke could not construct an empirical psychology until he had disclaimed all allegiance to innate ideas, so Berkeley could not construct an idealism until he had brought to bear in a polemical fashion all his forces against abstract ideas. Of his two masterpieces he devotes the entire essay on the *Theory of Vision* and a good part of his *Principles of Human Nature* to this end.

1. In proof of this he advances his analysis of abstract ideas. He not only denies that abstract ideas have a corresponding external reality, but he even denies that abstract ideas exist in the mind itself. The deception in abstract ideas arises from the use of words as general terms. Words are always general; ideas are always particular. There is never an idea that exactly corresponds to a word. Words are useful not as a conveyance of ideas, but for inciting men to action and arousing the passions. Whenever a word is used, what we think of is the particular sense, idea, or group of sense objects that give rise to it. For example, the word "yellow" cannot be employed by us except in connection with the thought of some particular yellow thing. Berkeley is a nominalist of the extremest type.

2. Again Berkeley seeks to show, by demolishing the distinction between primary and secondary qualities, that matter as an abstract idea has no existence. This distinction was as old as the Greek, Democritus, and was accepted by Locke. We have already described it: of a thing like a lump of sugar, the sense qualities of whiteness, roughness, sweetness, etc., are secondary because they depend upon our sensations for their ex-

istence; they are the ways in which our organisms are affected, and not true copies of things; the mathematical qualities, form, size, density, impenetrability, are primary because they exist independent of our senses and are true copies of things. Hobbes had already shown that such a distinction is erroneous, and Berkeley followed him by maintaining that all qualities are secondary. The size and impenetrability of a body depends as much on sense-perception as its sweetness and color. At some length in his *Theory of Vision* Berkeley takes up the question of the solidity, or third dimension, of a material body, and shows that it is an inference depending on sensations arising from the convergence of the two eyes and complicated by the sensations of touch.

Berkeley professed to be pleading the cause of the man in the street who wants a philosophy that is real "common sense." He maintained that the conception of matter is only a philosophical subtlety for those philosophers who seek for something beyond perception. The man in the street wishes to explain things as he finds them, and not to seek mysterious abstractions which philosophers say in one breath that we know, and in another that we cannot know.

Therefore, while Berkeley agreed with Locke's assumption of the existence of the spiritual substance, he departed from Locke in denying the existence of a material substance. Berkeley accepted, therefore, one of the two assumptions common to the Enlightenment, but he denied the other. Now Berkeley was trying to prove a thesis. He was controlled by the ideal of his ardent religious nature to free religion from false philosophy. He felt that the foes of religion — atheism and materialism

—had employed effectively abstract ideas, which had been one of the weapons of religion, against religion itself. Berkeley concentrated his attack against the traditional scholastic conception of abstract ideas in general and the abstract idea of matter in particular. Abstract ideas have no existence; the idea of a material substance is an abstract idea and therefore has no existence. Berkeley was bound from the beginning of his religious crusade to explain away the existence of material substance.

The Positive Side of Berkeley's Philosophy.* In the construction of his theory in a positive way Berkeley abridged the dualism of "common sense," and asserted that the abridged form was better. He converted the dualism into a religious hypothesis, but it was a dualism still, — a dualism of minds and their ideas. Berkeley then set to work to show how much better his theory would explain the problems of knowledge. "Berkeley sought to humanize science." He set the spirit free by relieving it of the falsities of the old dualistic assumption, but the usefulness of his abridgment lay in its solution not of metaphysical, but of epistemological problems.

1. Berkeley's theory may be summed up in his own abbreviated statement of it, — *Esse est percipi* (to be is to be perceived). Or it may be stated in that figurative and oft-quoted paragraph, "Some truths there are so near and obvious to the mind that a man need only open his eyes to see them. Such I take this important one to be, viz., that all the choir of heaven and the furniture of the earth, in a word all those bodies which

* Read Hibben, *The Philosophy of the Enlightenment*, chap. iii.

compose the mighty frame of the world, have not any subsistence without a mind — that their being is to be perceived or known." Or we may state Berkeley's position in the terms of a modern interpreter[1] of him: "All objects are mentally discerned; all objects are mentally constituted." Berkeley means that the existence and character of all objects are within the confines of consciousness, and there are no objects outside of consciousness. As sense-perceptions they have reality; as memories they lose their warmth and distinctness; but they are not objects at all when neither perceived nor remembered. These objects are always colored by the sense-perception. They are received through the consciousness, and constituted by the consciousness. Minds and their ideas are all that exist.

2. Berkeley does not try to prove the existence of the mind or soul, nor does he attempt to show that we perceive the soul. But in the spirit of the Enlightenment he hardly questions its reality. He takes its existence for granted, and like the philosophers of the period he makes a direct appeal to consciousness. "I know I am conscious of my own being." Like Locke and Descartes he alleges the direct intuition of the self. In the *Principles* he speaks of "a notion of our own minds or spirits." Since the ideas are copies of other ideas, there can be no idea of the soul; but the "notion is like the spirit that knows it." We have therefore direct knowledge or *notion* of ourselves in knowing our ideas; we have direct knowledge of something superior to the ideas, an activity whose reality consists not in being perceived, but in perceiving. Indeed, he made the assertion in his *Commonplace Book*, which he began in

[1] Hibben, *Phil. of Enlightenment*, p. 64.

college, that nothing properly does exist but conscious persons. All other things are not so much existences as signs of the existences of persons. One is absolutely certain of what one means by "I."

3. Spiritual substances are sufficient and adequate to explain all ideas. There is no difficulty in explaining the images of our own minds, for our minds control them. But what explains the existence of our percepts over which we have no control? What substantial support have they if we remove the "material hypothesis"? Suppose I grant that I exist and have control of my imaginative ideas, and that other minds exist and have control of their imaginative ideas, how then, I ask Berkeley, am I to explain the great world of perceptions over which neither I nor other men have control?

Berkeley's general psychological position must be summarized here in order to answer this important question. It is as follows: (1) All things are nothing more than perceptions. (2) All ideas, both perceptions and images, are passive, and must be caused by something in itself active. (3) Souls are active and the cause of ideas. The question then is, What soul is the cause of our perceptions? Perceptions are ideas, are passive, but they are the ideas of whom? Repudiate the material substance, and what is the cause of perceptions?

Perceptions are not originated by me; they cannot be self-originated, because they are passive and not active; they cannot be originated by a material substance, because it does not exist. Their origin must be sought in the infinite spirit, or God. If you will examine the ideas which constitute what we call nature objects, you will observe these significant characteristics about them, to which attention has already been called. They have, as

we have said, a strength, liveliness, distinctness, and orderliness that distinguish them from imaginations. They are God speaking to us in His orderly way. Nature objects are the language of God. The regularity and dependability of the world of nature reveal the character of the Being whose language the world of nature is. They reveal a Being who is intelligent, infinite, omnipotent, and benevolent. The regularity of the changing seasons, the constancy of the heavenly bodies to their orbits, the provision of the earth for man — all the laws of nature are the language of an orderly Being.

Now we see the importance of Berkeley's deviation from Locke in his (Berkeley's) conception of all ideas as passive. All ideas being passive, there must be a cause of them. The only active causes are spirits. I am the cause or perceiver of my own imaginations. I perceive another's movements and know that another person or spirit must be the cause. When nature speaks in its invariable and purposive harmony, I know that an infinite spirit is the cause. We are indeed living in a society of spirits, who speak to one another in their own language.

The doctrine of Berkeley strikes beginners and people who temperamentally cannot understand it, as absurd. The reduction of the trees, sky, etc., to ideas is a theory that has brought down all kinds of ridicule upon it. When Dr. Johnson heard of it, he is said to have stamped his foot upon the ground, and thereby refuted it. Byron is quoted as saying, "If there is no matter, and Berkeley has proved it, it is no matter what he said." Others have asked if we eat and drink ideas and are clothed with ideas. But Berkeley never doubted the existence of material objects, and the point of his theory is missed

if we think that he did. What he denied is the existence of an unknown substance, matter, behind external objects. "The table I write on exists, that is, I see and feel it; and if I were out of my study I should say it existed, meaning thereby that if I were in my study I might perceive it or that some other person does perceive it."

Another question has been asked of Berkeley which goes deeper. If to be is to be perceived, what existence has a tree in the forest that no one has ever perceived. What existence have past events that are forgotten? Berkeley has considered this objection and has answered it. When he says that existence depends upon perception, he does not mean merely my own perception. Berkeley is not what in philosophy is called a solipsist (*solus* and *ipse*), *i. e.* one who believes that nothing exists but himself and his modifications. A thing may have existence in the mind of some one else. If the thing has never been perceived by any human being, it is perceived, if the thing exists, by the mind of God. The modern scientist assumes the existence of matter in the whole universe. Berkeley assumes the existence of a perceiving God. One is the materialistic and the other the religious explanation of the universe.

The Life and Writings of David Hume * **(1711–1776).** Hume's life bears some marks of external resemblance to Berkeley's. After periods of training that differed very greatly in point of discipline, but were almost the same in point of time, both produced, at about the age of twenty-five, their most important philosophical works.

* Read Rand, *Modern Classical Philosophers*, pp. 326–342; Eucken, *Problem of Human Life*, pp. 420–422; Windelband, *Hist. of Phil.*, pp. 472–476.

Both turned from philosophy to other pursuits — Berkeley to missionary work at the age of thirty-six, and Hume to politics at the age of forty-one. There the resemblance between the two men ceases; for they were antipodal by nature, and animated by different purposes. The enthusiastic nature of Berkeley is in marked contrast with the unimpassioned nature of the Scot. Hume was unimaginative to the last. He was unimpressed by the legends of the border where he lived; he had no love for nature and no appreciation of art. "While Hume's intellect was imperial, his sympathies were provincial." Berkeley's sympathies were imperial and his intellect was in their service. Hume was a man of kindly disposition and of moderate temper, yet he was vain, and interested above everything else in his own reputation. No object seemed worth while to him, unless it made for the improvement of his talents in literature. The failure of the *Treatise* was a blow from which he never recovered. Always afterward he had an eye to popularity, and this is important in making up our judgment about him. All his works after the *Treatise* were written to please his readers and for personal success. Locke the Englishman, Berkeley the Irishman, and Hume the Scotchman, came from the same middle class of society, had university training, were engaged in public service, and are to be classed in the same empirical school of philosophy. But they were personally very different kinds of men, and were types, although perhaps not representatives, of their nationalities.

1. *Period of Training* (1711–1734). Hume was born in Edinburgh and lived there and at Ninewells on the border. He was a student at Edinburgh University

(1723–1726) and studied law the next year. He was in business in Bristol in 1734. In all the occupations of this period he was unhappy.

2. *Period of Philosopher* (1734–1752). From 1734 to 1737 Hume was in retirement in France, especially at La Flêche, where he wrote his *Treatise on Human Nature*. He returned to Edinburgh in 1737 and published his *Treatise* (1739–1740). It was read by nobody and was an absolute failure. So he rewrote Book I in 1748 and called it the *Enquiry concerning Human Understanding*. Hume's full statement of his theory of knowledge is contained in the *Treatise* and not in the *Enquiry*. He rewrote Book III in 1751 and called it the *Enquiry concerning Principles of Morals*, "of all my writings, incomparably the best," and in 1757 he published Book II as an *Essay on the Passions in Four Dissertations*. He became acquainted with Adam Smith in 1740; he published *Essays, Moral and Political*, in 1741–1742, and was a tutor in 1745, because he needed money. In 1746–1748 he became secretary in the English military embassy to Vienna. In 1751, the same year that he was recasting the third book of the *Treatise*, he wrote his *Dialogues concerning Natural Religion*, which was not published until 1779. His autobiography was also published posthumously.

3. *Period of Politician* (1752–1776). In 1752 Hume published his *Political Discourses*, "the only work of mine that was successful on its first publication." In 1754–1761, while Librarian at Edinburgh, he wrote and published his *History of England*. This work was the first serious attempt since the Revolution to give an impartial account of the earlier strug-

gles against the Stuarts. Through it he at last got great fame, and fortune followed in its wake. In 1757 came his restatement of Book II of the *Treatise*. In 1763–1765 Hume was secretary of the English Embassy at Paris, and he was made much of by French society. The thought of the French Enlightenment had advanced far enough to entertain him and his doctrines. Hume met Rousseau at this time. Later Hume was visited by Rousseau in England and was badly treated by the eccentric Frenchman. He says that Rousseau sins at the foundation. Hume was appointed Under Secretary of State in 1766; he returned to Edinburgh in 1769, and died in 1776.

Influences upon the Thought of Hume. The writings of Hume show no erudition, and for that reason it is uncertain what were all the sources from which he drew. He does not mention Descartes, for example, although he wrote his *Treatise* at La Flêche in the shadow of the school where Descartes was educated. It is probable, however, that Hume was influenced at least by the Greek philosophers of the Hellenic-Roman Period, and by Locke. During the years after Hume's student life at the university, he pored over the writings of the Roman Stoics in the library at Ninewells, and he felt the influence of Cicero, Seneca, and Plutarch. Hume read extensively, and he reacted from his reading. He became so dissatisfied with the past that he put it aside, in the belief that the true philosophy had not yet been written. In this reaction from the past he was influenced along the lines of Locke and Berkeley. He admired the advance that Berkeley had made over Locke, and naturally took a further step in the same direction. Hume was also acquainted with the

writings of Hobbes and with the history of the English theories of morals.

In 1740 he became acquainted with Adam Smith, the political economist, and Hume's *Political Discourses* (1752) anticipated Smith's classic *Wealth of Nations*. At this time (1752) he turned with all other Englishmen from the discussion of philosophical to political topics. There are many points of resemblance between Smith and Hume, especially in their ethical doctrine.

Dogmatism, Phenomenalism, and Skepticism. Hume liked to speak of himself as a skeptic, but philosophically speaking he was skeptical only of the dogmatic Rationalism of the Renaissance, which had made unlimited claims for the human reason. Hume maintained in the spirit of the Enlightenment that the human mind deals with ideas and not with reality. Human knowledge has therefore its limits. More consistently than Locke or any one else in the Enlightenment, he tried to show the limits and extent of human knowledge. Pure skepticism is the denial that there is any such thing as truth; pure dogmatism would be the deductive explanation of all problems from a set of infallible principles. It would be hard to find an absolutely true example of skepticism or dogmatism, for generally philosophical theories are a mixture of dogmatism and skepticism. Pyrrho is often given as an example of the pure skeptic, but Pyrrho, like all other Greeks, never for a moment doubted the existence of an external, material object (vol. i, chapter xii). Spinoza is a fairly good example of a pure dogmatist, but he developed his *Ethics* by means of interpolated principles not in his original assumptions. A thorough-going skeptic would have to be a modern — not a Greek — who would deny

that truth can be known and that things exist. This was not Hume's contention. He affirmed the validity (1) of mathematical reasoning (2) and of matters of fact, and (3) the probability of the natural sciences. Hume may correctly be called a phenomenalist, a positivist, or an agnostic. So far as he maintained that there are some things which the reason cannot know, he is an agnostic. In his affirmation that we can know ideas and only ideas, he is a positivist. In his affirmation that ideas are the only existences, he is a phenomenalist. Are external objects the cause of sensations? Experience is dumb. Have external objects an existence? Experience is dumb. Are souls the substance of our thoughts? Experience is dumb. But mathematics has truth, experience is beyond question, and the workings of nature are probable.

We shall find Hume to be the keenest critical mind of this critical period of the Enlightenment. He is profoundly serious in his examination of the roots of the intellectual life. He is past-master in the art of raising questions. He not only shows that the fundamental theoretical problems are still unsolved, but he also calls to account the hitherto untested assumptions of practical life. But this is criticism, positivism, phenomenalism, or agnosticism, and not skepticism. He speaks of his doctrine as like that of the Middle Academy, in contrast with that of Pyrrho. He says that excessive skepticism upsets activity, employment, and common occupations. The conclusions of the intellect never agree with our natural instincts. Every time positive skepticism appears, nature destroys it.

Hume's conclusion as to the practical attitude of the positivist toward life can best be stated in his own words

(*Treatise*, Book I, Conclusion): "Shall we then establish it for a general maxim, that no refined or elaborate reasoning is ever to be received? If we embrace this principle, we run into the most manifest absurdities. If we reject it in favor of those reasonings, we subvert entirely the human understanding. We have, therefore, no choice left, but between a false reason and none at all. Most fortunately it happens that since reason is incapable of dispelling these clouds, nature suffices to that purpose, and cures me of this philosophical melancholy. I dine, I play a game of backgammon, I converse, and am merry with my friends. — No: If I must be a fool, as all who reason or believe anything certainly are, my follies shall at least be natural and agreeable. In all the incidents of life we ought still to preserve our skepticism. Where reason is lively and mixes itself with some propensity it ought to be assented to."

The Origin of Ideas. Locke did not proceed to the construction of his theory of knowledge until he had disclaimed at length his belief in the existence of innate ideas. Berkeley went further and made his polemic against the existence of all abstract ideas. Hume went still further and denied that any ideas existed except those derived from impressions. Locke's attack upon innate ideas was an attack upon unverified tradition; Berkeley's attack upon abstract ideas was an attack upon materialism; Hume made a general attack upon rationalism. The psychology of Hume is thus made simple. It is a cancellation of the factors incompatible with strict empiricism — the factors which he found in Locke and Berkeley. Hume's empirical psychology is simply this: *every idea is the image or copy of an impression.*

What is an impression? Impressions are of two classes: (1) sensations or outer impressions; (2) feelings or emotions or inner impressions. Impressions are never mistaken, because they always have a very lively and vivid character. What is an idea? It is the copy of an impression. An idea should never be mistaken for an impression, because it is fainter and more feeble than the impression of which it is the copy. For example, the sensation of yellow is more vigorous than the thought of yellow; the feeling of anger more vivid than the thought of anger. Impressions are simple and elemental: Can we go back of them and find their origin? We cannot. We receive impressions; echoes of impressions linger as ideas; ideas may be compounded with other ideas. Hume deals in his criticism mostly with the compounding or combining of ideas, but this is the sum and substance of his psychological analysis of our mental life. The following table will help us.

Perceptions (= mental states)	Impressions (= original)	Sensations or outer impressions
		Feelings or inner impressions
	Ideas (= derived)	Memories or an exact reproduction of an impression or of a combination of impressions
		Imagination or a combination, separation, and transposition of impressions according to the imagination's own laws.

It should be noted, however, that the above classes are not coördinate according to Hume. Impressions are

prior to ideas, and of the impressions the feelings or inner impressions are "posterior to the sensations and derived from them." Hume is a sensationalist, for the most original of the impressions are sensations.

The Association of Ideas. Since nothing can enter the mind except through the two portals of outer and inner impressions, every idea in the mind is the copy of one or several impressions. How then can there be any such thing as error? Error arises from the understanding and imagination in their manipulation of the impressions — from the faculties of the mind combining, separating, and transposing the impressions and their memories. An idea resulting from such transposition may and often is referred to an impression different from the one of which it is the copy.

What does Hume mean by the faculties and powers of the mind? He does not mean that the mind with its functions exists as a reality, since all that exist are impressions and the copies of impressions or ideas. Hume means by mental faculties and powers the various modes by which ideas combine. Hume makes no distinction between memory, imagination, judgment, conception, etc., except (1) as different groupings of ideas and (2) as accompanied by different feelings. *The whole mental life and the faculties of the mental life are nothing but an association of ideas.* Isolated ideas are explained as copies of isolated impressions; and from these ideas are derived groups of ideas which we call trains of thought. Why do ideas group themselves together? The only answer is that it is the nature of ideas. Hume frequently speaks of these associative relations as "the manner of conceiving ideas." He also says that there is a "gentle force" or "determina-

tion" of the ideas to relate themselves with other ideas. Given the impressions and their relations, and Hume will explain the whole knowing process. Associative relations take an important place in Hume's theory, but some critics say that they are interlopers; that he has introduced them by a back door; that they are not mentioned in his psychological inventory.

But to Hume there is nothing mysterious about the association of ideas. They are combined, transposed, augmented, and diminished according to fixed rules under mechanical laws. Their relationship takes place without freedom. Impressions occur in the way they happen to occur. Ideas combine in the way they happen to combine. Relations between ideas are accidental and external. There is only one quality of ideas that does not depend on its accidental relation to other ideas. This is the quality of non-contradiction. This is the necessary property of an impression. An impression must be what it is, and cannot be conceived as having properties contrary to its own nature. The quality of identity in an impression is intrinsic and necessary.

According to Hume, there are three fundamental ways in which ideas associate, called the three laws of association. (1) There is *the law of resemblance* or contrast, by which the occurrence of a thing calls up a similar thing or its opposite. Mathematics is based upon this law of the resemblance, the contrariety, and the quantitative relations of ideas. (2) There is *the law of contiguity in time and space*, by which things happening together in time and space are recalled together. Upon this law are based the descriptive and experimental sciences. (3) There is the law of causation, upon which religion and the metaphysics of the world of

nature are based. The question with Hume is, How is he to explain all these laws of association as derived from impressions? If they cannot be derived from impressions, then his theory that all knowledge is derived from impressions goes to the wall. The Rationalists and even his predecessors, Locke and Berkeley, had conceived mathematical propositions and causation as underived and in the nature of things. If Hume is to establish his doctrine of complete sensational empiricism, here is his test.

These associations, and not isolated impressions, are the objects of human interest, inquiry, and investigation. Hume makes a further reduction of associations by his well-known classification of them as either "relations of ideas" or "matters of fact." Associations of contiguity and associations of causation are "matters of fact," while associations of resemblance are "relations of ideas." Furthermore, Hume looks upon associations of contiguity as those of outer impressions, associations of resemblance as those of inner impressions, while associations of causation are not what they are alleged to be, but are derived from some inner impressions.

Objects of Knowledge	Matters of Fact	1. Contiguity association	Outer impressions	Descriptive Sciences
		2. Causation association[1]	Inner impressions	Metaphysics
	Relations of Ideas	3. Resemblance association	Inner impressions	Mathematics

The Association of Contiguity. This is the most elementary of the three classes of association, and concerns the spatial and temporal order in which impressions

[1] Causal events are to Hume merely *alleged* matters of fact.

come to us. Two impressions come at the same time or in succession, and when one of them is remembered, the other is likely to be remembered also. We see a man and hear his name; when we remember the man's face, we may remember his name also. Hume maintains that this association of succession or coexistence is given with the impressions themselves. It is the order of the *outer impressions*. We perceive the order of the outer impressions with the same certainty that we perceive the contents of the impressions. *This is the only certainty we have about "matters of fact,"* — a certainty of the exact order of our immediate outer impressions. We know the order in which our impressions do occur, but, as we shall see, when we argue from this that our impressions must recur in the same order we are involved in a fallacy. Any order may recur. The fact that the sun rises in the east to-day does not make certain that it will rise in the east to-morrow. It is only a matter of probability, however many times repeated. There is no certain science of "matters of fact."

The Association of Resemblance. This is a clear and distinct association which is given with the impressions. When we have an impression, we see intuitively its similarity or difference to other impressions, and the degrees of likeness and unlikeness. The face of one man reminds us of another man, or we contrast it with a brute's face. *This association concerns only inner impressions*, while the association of contiguity concerns outer impressions. This has to do with the "relation of ideas," while the association of contiguity has to do with "matters of fact."

1. **Mathematics.** But there is this difference between the association of resemblance and that of con-

tiguity — upon resemblance is founded a demonstrative science. This is mathematics — the sole demonstrative science. The subject-matter of mathematics consists of the possible relations between the contents of our ideas — the possible relations between our inner impressions. These relations are intuitively known by us, and out of them we get a science of complete certainty. We make a comparison between the magnitudes in the contents of ideas, and we analyze their regularity. This is mathematics, and it is a perfectly legitimate science. Because it confines itself to the relations between ideas, and has nothing to do with "matters of fact," it can be a demonstrative science. All mathematical knowledge is restricted to the study and verification of ideas, and has therefore nothing to do with the external world.

2. **The Conception of Substance: Hume's Attack on Theology.** But the association of resemblance has been made the basis of a common illusion. It has been made to transcend its proper sphere of a relationship among inner impressions; and resemblance between ideas has been taken by people generally to mean metaphysical identity or substance. It has been transformed from a relationship between ideas to a relationship between "matters of fact." Now substance is evidently not an association given with the impressions, like their temporal and spatial order in the association of contiguity, nor is it mere impression of resemblance. Substance is the conception of an unknown, indescribable something back of impressions. There is the conception of the material substance or matter, and the spiritual substance or the soul. How did such illusory conceptions arise? If Hume rejects them as matters of real knowledge, he must neverthe-

less explain their psychological origin. The illusory idea of substance originates from the similarity of the frequent conjoining of certain impressions. The impressions — sweet, rough, white, etc. — occur together so often that the imagination creates the conception of the substance of sugar behind them. This arises not from the first experience, but after the association of impressions has been observed a large number of times. From the frequent association of ideas arises the *feeling* of their necessary coexistence. Thus do we come to have the idea of a material substance.

Hume evidently follows Berkeley in his criticism of material substance. But Berkeley went only halfway. Berkeley had found that bodies were only conjunctions of sensations, and he had rejected as meaningless the unknown substance behind them. He did not see that the same attack could be made upon spiritual substances. Berkeley's argument against the substance of the cherry could be used against the Ego or the Soul. Have I the impression of my Ego? Can I touch it or see it? The simple test shows that I know nothing about it, and I cannot affirm whether or not it exists. But if the conception of the Soul has no reality as an object of knowledge, how can it be psychologically explained? How does it arise in the mind? The idea of the Soul is due to the frequent reappearance of the same trains of thought in my mind. Their similarity gives rise to the feeling that a metaphysical identity, or Soul, exists behind them.

The Association of Causation: Hume's Attack on Science. Among the many traditional conceptions upon which Hume turned his critical examination, that of causation occupies the most of his attention. He dis-

cusses it both in the *Treatise* and in the *Enquiry*. He is the first philosopher since Aristotle to give it comprehensive treatment. He saw that all philosophical, theological, and indeed scientific knowledge rests upon this conception of causation. It was accepted without question by the Scholastics of the Middle Ages, the Rationalists of the Renaissance, and the scientists of his own time. If the conception is valid, Hume's criticism goes for naught; for "by means of that relation we can go beyond the evidence of our memory and senses." In that case what becomes of Hume's psychological analysis that all knowledge consists of impressions and ideas? And if Hume's psychology falls, all his criticism of the spiritual and the material substance falls also. Upon the validity of the concept of cause depend many of the scholastic arguments for the existence of God, whose existence we can demonstrate although He is not an object of sense impression. Imagination can then go on unrestricted; for God is accepted not only as cause, but as first or uncaused cause. Descartes, Leibnitz, and even Berkeley and Locke had accepted the causal argument for the existence of God, although the latter two had pretended to restrict knowledge to sense-perceptions and ideas. Again, the causal concept has been the foundation for the belief in a functioning soul behind the mental and physical activities of a human being; and on the same causal concept man has argued from sensations to their material substrate. All this is unwarranted and unrestricted knowledge because it "goes beyond the memory and senses." Not only theology, but science itself has gone "beyond the memory and senses." Hume dares to doubt the certainty of the causal principle even in scientific knowledge. Is there

any necessary connection among events so that with certainty we can predict the occurrence of one event if another is given? Is there in nature and history any causal law so binding that every event is a necessary result of what has gone before and a necessary cause of what will come? The question of cause is, therefore, paramount with Hume. If he is successful in impeaching cause as he has been in the case of substance, scientific theory must fall with theological dogma.

In his review of the conceptions of time and space (association by contiguity), Hume had found succession to be a quality of impressions and to be given with them. But that is all that can be said — the relation is one of time order, but not a relation that is necessary. The outer impressions happen to occur thus and thus; they need not have occurred thus, and may never occur in this order again. This temporal order is not by any means a causal order. The idea of cause is that of power transferred, but we have no impression of power. Impressions come as sequences, not as consequences or as powers. Sequences of impressions are the only "matters of fact"; consequences are not "matters of fact." They must, therefore, be only "relations between ideas" and have no objective reality. From Hume's point of view this is sufficient to show that cause is not valid and real.

To deny that we have the concept of cause would, however, be nonsense. We do have the concept, and how is its psychological origin to be explained? How does the idea arise? It does not originate (1) as an *a priori* concept, *i. e.* by an analysis of ideas, nor (2) as an outer impression, *i. e.* a sensation, nor (3) as memory, since memories are images of impressions. The

idea of cause originates from an inner impression — a strong and lively feeling connected with the imagination. But how does it happen that the feeling is so strong that it makes us believe the idea, with which it is connected, is a reality? The feeling does not arise from a single instance of conjunction of two impressions, but from the conjunction of two ideas repeated many times. *The belief in cause is a feeling originating in the constant conjunction of impressions.* This explains why the ideas that fire will burn, that poison will kill, that water will wet — are so lively. The conjunction occurs many times, and an inner necessity or compulsion arises to imagine the second impression after the first. Given the first idea, we learn to expect the second. Repetition produces nothing new in objects, but it produces in the mind a new feeling to pass from one idea to the idea usually attending it. Necessity exists in the mind and not in the objects.

The Extent and Limits of Human Knowledge. What remnants of knowledge remain after Hume has applied his destructive criticism? His critics would answer that, if Hume had been consistent, no knowledge whatever would remain. Upon the basis of pure positivism, that all knowledge is composed of impressions and their copies, knowledge is an impossibility. But he introduced an additional element, "relations," that made knowledge possible because it afforded synthesis and allowed distinctions.

Taking Hume's doctrine as it stands, his results are these. There are two classes of sciences, the formal and the empirical. The formal includes logic and mathematics, and consists of knowledge of relations between ideas. Such knowledge has certainty and validity. Em-

pirical sciences consist in knowledge of matters of fact. Such knowledge never amounts to more than probability. There is no certainty or demonstration in natural science. Its results call forth not conviction, but belief. Beyond these subjects we have no knowledge whatever. Metaphysics and theology are only fictions. Beyond impressions and the copies of impressions we can make no assertions. The tendency of thought to trench beyond its own territory is the cause of all our metaphysical difficulties. It tries to do what it was not intended to do, and the result is abstract ideas. Reason and the relation of resemblance give us the erroneous idea of spiritual and material substance; imagination and the relation of cause give the erroneous idea of the fundamental principle of nature.

Hume's Theory of Religion and Ethics. Hume is so true an empiricist to the end that he is a remarkable exception among the philosophers of the Enlightenment. He alone among philosophers shows the historical sense in the application of his positivism to religion and morals. In general the Enlightenment took no account of the past; in this Hume differs from his contemporaries. Hume was the destroyer of deism because he advanced historical evidence against deism. Deism had three principles: that religion is the object of scientific investigation; that religion had its origin in the reason; and that "natural religion" is the oldest form. Hume agreed to the first proposition, but he revealed his historical instinct by showing that religion did not originate in the reason, but in the feelings; and that not "natural religion," but idolatry, etc., is the oldest form. Furthermore, he stood almost alone among philosophers of the period in building ethics upon the feelings rather than

upon the intellect. The ethical motives of man are pleasure and pain, and not an idea of the reason. Hume's historic sense led him to this conclusion.

Both morals and religion should be empirically investigated. As in science, so in them the most cogent conclusions are only probable and not intuitive. Our moral activities are under the same kind of law of cause that exists in the world of nature-phenomena. The will is determined by the feelings, and the reason is the slave of the passions. Our moral judgment is based on the feeling of sympathy (Adam Smith). It is practically probable that there is a purpose in the world and therefore a God. But this cannot be established. On the same principle of probability the world may have grown up mechanically or by chance. Religion is naturally reasonable enough, but its doctrines cannot be proved.

The Scottish School. This school represents in Great Britain the reaction from the sensualism of the Enlightenment. The Scottish School was the British reply to Hume, just as Kant was the German reply. They were the late eighteenth century reactions in two countries to the Enlightenment. The teaching of Kant was, however, also the beginning of a new movement and a new period. The Scottish School has no such importance.

Thomas Reid (1710–1796) was the founder. Reid admitted that Berkeley and Hume drew legitimate conclusions from Locke's general assumption that the objects of thought are not things, but ideas. Therefore Reid maintained that Locke's position must be given up. Still empiricism remains tenable and must be applied to the phenomena of mind. What are the data of consciousness? Not individual ideas, as Locke said, but complex ideas or judgments. The elements will be discovered

later by analysis of these complex states which are first given. The mind is not a blank piece of paper upon which simple characters are first inscribed, and then later the understanding introduced to form judgments and the reflection to add belief in the existence of objects. Our knowledge starts rather from judgments, which involve certain original truths or "natural judgments." Mankind possesses the faculty of "common sense," and this faculty makes these truths a common possession. Among the principles that "common sense" includes are self-consciousness, the reality of objects perceived, and the principle of cause.

The Scottish School called attention to the importance of self-observation. The members of the school made their attack upon sensualism from the point of empirical psychology. Philosophy became in their hands the perfecting of psychology as a science of inner observation. Thus they were in accord with the school of the Enlightenment, although opposed to its sensualistic outcome. The prominent members of the school were Reid, Dugald Stewart, Brown, and Sir William Hamilton.

CHAPTER IX

THE ENLIGHTENMENT IN FRANCE AND GERMANY*

The Situation in France in the Enlightenment. The historian of the French Enlightenment has to take account of the reign of two kings; that of Louis XIV (1643–1715); and that of Louis XV (1715–1774). Together they cover the long period of one hundred and thirty-one years. The reign of Louis XV marks the actual development of the Enlightenment, while that of Louis XIV contains the causes. The long reign of seventy-two years of Louis XIV had been an absolute, arbitrary, and personal government. It had been an age unsurpassed in literature and eloquence, but also an age in which all those subjects that did not redound to the glory of the church were suppressed. It had been the age of Molière, Corneille, Racine, La Fontaine, and Fénelon; an age when art was encouraged, but also an age in which political and philosophical originality would not presume to breathe. Between Descartes' death in 1650 and the death of Louis XIV in 1715, one finds a single philosopher, Pierre Bayle, and he had to leave France. The Newtonian physics was not accepted in France until 1732 — forty-five years after its publication in England. Upon the death of Louis XIV the artistic glories of his reign lost all their value for the nation. In their place was set the problem of the material misery of the nation, which had been caused

* Read Eucken, *Problem of Human Life*, pp. 415–420.

by the long wars and the extravagance of paternal government.

The reign of Louis XV seethes with the struggle of social forces. It is a period in which the individual is striving to gain his rights under the institutions that have so long repressed him. The development of the French Enlightenment is identical with the struggle for political liberty. In no other period of history — except perhaps the Age of Pericles — is the history of philosophic thought so intimately connected with political history. The fifty-nine years of the reign of Louis XV are filled with exciting events which interest both the philosopher and the historian. The French Enlightenment is the "reaction against that protective and interfering spirit which reached its zenith under Louis XIV." With Louis XV the magnificence and the utility of ecclesiastical and political absolutism could not be maintained. For the hierarchy of the church was unable longer to keep up its claim of independence and morality; and the State was rapidly exhausting its power by exhausting its financial resources. Each event in the history of France in the eighteenth century had therefore two aspects — each led to the Revolution, and each was a step in the development of the Enlightenment of the individual. The pioneers in the movement could not have been conscious of the end to which their criticism would lead; but to us looking back upon the century the result seems inevitable. A comparison with the situation in England is interesting. While in England the political and ecclesiastical institutions were so elastic that they could without disintegrating absorb the movement of the Enlightenment, and while they were so little bound to traditional institutions that the growth

in individualism would be constitutional, the situation in France was exactly opposite. (1) In France the church and the political institutions had become inelastic bodies under Louis XIV. They had reached the limit of their development. So deeply rooted in absolutism and special privileges were they that they were not open to innovation or reform. During the reign of Louis XV the only question was, which would be crushed — the new individualism or the old institutions. No compromise was possible. The institutions, having survived their usefulness, gave way. (2) In the next place the French church and state had for many years been identified with oppression and tyranny, while the English people had within a century gained many needed reforms by beheading one king and forcing out another. Consequently the English government of the eighteenth century was identified with the liberty of the individual. In England political and religious speculation followed and did not precede political reforms. In France the opposite was true. To the mind of the French people the church represented only superstition, and the state only profligacy and tyranny. The more they seemed to support each other in one social structure, the more rapid, virulent, and excessive would naturally be the reaction against both when once individualism got a footing.

The result was that while in England the Enlightenment always remained critical and negative, in France it became an obstinate and positive dogmatism. Behind French criticism was developing a philosophical creed. The French Enlightenment was a social cause and a self-sustaining idea. The French philosophers of the eighteenth century, on the whole, were not superior men intellectually, for they were inclined to make the small

look large and the large great. But although their perspective was inaccurate, they had an enthusiastic faith in progress and humanity.

The English Influence in France. Louis XIV and his two predecessors had made Paris the intellectual centre of Europe, and up to 1690 it had no rival. The French language had taken its place beside the Latin as the language of science. The circle of scientists existing just before and at the beginning of Louis XIV's reign had its equal nowhere in Europe. We remember how Hobbes found Euclid in Paris, Locke spent four years at or near Paris, Leibnitz gained there all his mathematical erudition and training. During the seventeenth century Paris was the centre of scholastic influence, and this is seen directly or indirectly in the writings of all seventeenth century philosophers. The English had taken their cue from the French; but on the other hand, it is doubtful if as late as the death of Louis there were a half dozen Frenchmen that knew the English language.

About the time of the publication of Locke's *Essay* the intellectual centre of gravity began to move from Paris to London. The founding of the Royal Society in Oxford in 1660 was the beginning of the organization of British scientific influence. Newton's physics (1687) then began to supplant the Cartesian physics, and Locke's psychological doctrines the dogmatism of the Rationalists, among the thinkers of western Europe. Newtonian physics and English empiricism became the scientific watchwords of the eighteenth century; and although the French were late in accepting them, it is said that at the end of the Enlightenment there was no cultured Frenchman who could not read English. We

find that such notable Frenchmen as Voltaire, Montesquieu, Buffon, Brissot, Helvétius, Gournay, Jussieu, Lafayette, Maupertuis, Mirabeau, Roland, and Rousseau visited England during the period from the death of Louis XIV to the Revolution. Poets, mathematicians, historians, naturalists, philologists, philosophers, and essayists all agreed to the necessity of studying the language and people on whom their fathers had not deigned to waste thought except in contempt.

But perhaps the political motive was quite as strong as the scientific in turning the French of the eighteenth century toward England. The English government was the example of political liberty of that time. The rising inquisitive thinkers of France had no alternative but to turn to free England for spiritual support against their own decrepit tyranny. The first French visitors were amazed at English prosperity, even though the crown had decreased in power — amazed at the liberty of the press and Parliament, amazed at the control of the revenues by the representative body. England thus became the school for all the thinkers of Europe, and through her literature taught the lesson of political liberty first to France, and then to all Europe.

The Two Periods of the French Enlightenment. The eighteenth century divides itself in France much the same as it does in England. There are two periods: the first extending to the middle of the century, when the Enlightenment of the individual is thought to lie in intellectual cultivation; the second, when his salvation becomes social and practical. The first period is dominated by Voltaire, and advanced by Montesquieu and the Encyclopædists; the second is dominated by Rousseau, and results in the Revolution.

The two periods have a common fundamental motive, although the means used are radically different. Both represent a gradual progression toward the elevation of the individual in his reaction against the institutions of the seventeenth century. But the first was an intellectual Enlightenment and all that this means, while the second was emotional and social. The first was aristocratic, while the second was democratic. Yet the whole movement was a gradual filtering of the doctrine of individualism from the upper to the lower classes. It naturally took the form, first, of intellectual culture, and then of an appeal to spontaneity. The intellectual theories of the first period were bound to find practical expression in the second. In the first period the champions of the ancient monarchy were forced to defend it on their opponents' own ground — that of rationality. In the second period, the monarchists had to change their battle-ground and make some practical reforms. In the first, the attack was made principally on the church, in the second on society. While the attack on the state began early, it attained significance not until the middle of the century.

The Intellectual Enlightenment (1729–1762). Voltaire, Montesquieu, and the Encyclopædists. The first representatives of the French Enlightenment were Voltaire and Montesquieu. Voltaire went to England in 1726, and Montesquieu in 1728, and they both returned to France in 1729. Voltaire published his *Letters on the English* in 1734 and his *Elements of the Philosophy of Newton* in 1738.[1] Montesquieu had published a fierce

[1] Voltaire's *Letters on the English* were written in 1728, published first in London, and appeared in France in 1734. His *Elements of the Philosophy of Newton* was published in Amsterdam in 1738, but was not allowed to be published in France until 1741.

invective against the political institutions of France in 1721, a discussion of the decadence of the Romans in 1734, and his famous *Spirit of the Laws* in 1748, selling twenty-two editions in eighteen months. Voltaire introduced and espoused the religious theory of Locke in deistic form, and Montesquieu expounded Locke's theory of government. Their writings were widely read by the upper classes, and this theoretical revolutionary movement against all existing institutions got momentum about 1735.

The aim of this movement was entirely aristocratic. The solution of the existing predicament in France lay for them in the greater care of the masses by an enlightened tyranny. The dualism of the classes was always assumed. The few are to be cultured; for them reason is to take the place of dogma. The masses are not amenable to reason, have no capacity for education, and for them religion suffices. To free the individual from terror of the supernatural, to release his morality from Jesuitical dominance, to give him intellectual independence of state and church — this was the working idea of the intellectual Enlightenment. Thought should be free, and the conscience of the individual should be untrammeled, because the reason is a sufficient guide. Being thus rationalistic, the movement was aristocratic. A new aristocracy should be substituted for the old — an aristocracy of the cultured instead of the corrupt and ignorant, who were then the dominant French classes in church and state. The illuminati should participate in the existing political privileges.

Voltaire (1694–1778).* Voltaire was a deist when he went to England, and he was therefore very much

* Read Ueberweg, *Hist. of Phil.*, vol. ii, pp. 124–125.

impressed by the prevalent English deism. Among the English deists, Bolingbroke had the greatest influence over him, and he was the "direct progenitor of Voltaire's religious opinions." Bolingbroke's light and supercilious infidelity of the man of the world was suited to Voltaire. A universal genius, Voltaire wrote on every subject; but "not one of his books but bears marks of his sojourn in England." He read with familiarity all the English philosophers, — Hobbes, Berkeley, Cudworth, Locke; but always returning to Locke. "Harassed, wearied, ashamed of having sought so many truths and found so many chimeras, I returned like a prodigal son to his father and threw myself into the arms of that modest man who never pretends to know what he does not know; who in truth has no enormous possessions, but whose substance is well assured."

In his *Philosophical Letters* Voltaire makes invidious comparisons between Locke's Empiricism and Descartes' Rationalism, between English Deism and French Catholicism, and between the English government and the French government. Toward Christianity, as he saw it in his own country, his hatred amounted to fanaticism. His strictures were so scathing that Christians have looked upon him as an atheist. He was, however, a deist, who believed that, while we can know God's existence, we cannot know his nature. He was fond of bringing all dogma under criticism, and "while he denied nothing, he cast suspicion upon everything." He called himself the "ignorant philosopher." To him atheism was preferable to dogma and superstition. His passion for invective against the French clergy was so great that his constructive statements about God and immortality were cold and impersonal.

The Encyclopædists.* In modern times the French have been unequaled in their encyclopædias and dictionaries. The famous *Encyclopédie* or *Dictionnaire Raisonné* was what its name implies. It was published in seventeen volumes during the years from 1751 to 1766, and had an addition of eleven volumes of plates (1766–1772). Thirty thousand copies were printed in the first instance, and in 1774 it was translated into four foreign languages. The moving spirit and editor-in-chief was Diderot (1713–1784) and his chief assistant d'Alembert. They were assisted by many notable French writers like Voltaire, Rousseau, Grimm, von Holbach, etc., who wrote separate articles. There was a host of unsolicited contributors. Two years before the *Encyclopædia*, Buffon had begun to publish his *Natural History* in forty-three volumes, the last volume appearing in 1789. The *Encyclopædia* had two predecessors, — Bacon's chapter on *Experimental History* and Chambers's *Encyclopædia*. The articles in the *Encyclopædia* were presumably scientific explanations alphabetically arranged, such as would appear in any work of the sort. Frequently they were disguised attacks upon existing French institutions. Often a detailed description, as on the subject "Taxes" or "God," would reveal existing French conditions. As Comte says, "The *Encyclopædia* furnished a rallying ground for the most divergent efforts without any sacrifice of essential independence, and made a mass of incoherent speculation appear like a coherent system." The two successive periods of the movement of the Enlightenment unite in the *Encyclopædia* against the common enemy of authority.

* Read Morley, *Diderot*, vol. i, ch. v, pp. 113–171.

There are two things to be noticed in connection with the *Encyclopædia:* the men who wrote it went much further toward individualism and skepticism than did Voltaire; and the *Encyclopædia* reached a wider circle and different classes than did the works of Voltaire. Instead of the deism of Voltaire we find contributions from skeptics, atheists, and materialists,—men who are becoming more negative in their opinions as the century advances. The thorough-going agnosticism of the Encyclopædist group reached a point where it ceased to be a philosophy. Diderot had said that the first step in philosophy is unbelief, and his associates went so far as to think that unbelief is all of philosophy. Their extreme sensationalism, naturalism, and materialism sometimes appeared in disguised form in the *Encyclopædia*, but more often in independent writings. The *Encyclopædia* became the source of information for everybody. It spread information among all classes and undermined their reverence for French institutions. The result was that what had been sacred to the court and the laborer because it was traditional, now became the object of scorn to all.

The most profound of the sensationalists of this time was Condillac (1715–1780),* who does not, however, appear to be connected with the *Encyclopædia.* He published his *Treatise on Sensations* in 1754, which reduced Locke's psychological analysis to a pure sensationalism. The well-known figurative statue endowed only with the sense of smell was conceived by him. He introduced Locke's psychology into France, whence it was carried into Germany.

* Read Rand, *Modern Classical Philosophers,* pp. 347–375.

The Social Enlightenment (1762–1789). The second period of the French Enlightenment begins with the publication of Rousseau's *Contrat Social* in 1762 and culminates in the Revolution. The influence of Rousseau dominates the second period as that of Voltaire dominated the first. Voltaire had never aimed at a social revolution. His objective point was to reinstate the understanding, to emancipate the individual by self-culture and by freedom of thought. He was not historian enough to see that he could not revolutionize intellectual France without pulling down the social structure. He did not realize that in striking at the tyranny of the church he was dealing a fatal blow at the structure of French society. The literary fencing between Voltaire and the adroit churchmen might have been amusing, had the issue not been so serious. But although superficial and vain, Voltaire was downright in earnest. At one time it seemed as if the intellectual Enlightenment would work itself out in the church. But the causes of the revolt were too deeply social, the malady against which Voltaire was aiming was too vital; and besides, at that moment attention was being directed to the character of the State itself.

Rousseau (1712–1778).* Rousseau began at the point where Voltaire left off. He was under the influence of Voltaire at the first and received from Voltaire his original productive impulse. But the concrete right of individuals, and not their abstract intellectual freedom, was what appealed to Rousseau. Strict moderation and literary freedom were too negative, half-hearted, for a reformer of Rousseau's type. Public opinion was not to be found in Versailles, as Voltaire thought, but in the streets of Paris. The Revolution

* Read Eucken, *Problem of Human Life*, pp. 423–433.

then came to a head, and we find the schools of Voltaire and Rousseau locking horns. Voltaire's theory of moderation was represented in the Constituent Assembly and the upper and middle classes, while Rousseau's radicalism was introduced in the Convention and fully expounded in the sections of the Commune of Paris which attacked the Convention. History shows how impossible the aim of each school was, and how the contest had to be fought over again in the nineteenth century.

Rousseau lived a wandering and adventurous life, full of hallucinations and self-created trouble. He made many friends, only to quarrel with them. He was half insane, and his career inspires both disgust and admiration. His numerous works fill twenty-two volumes, the most important ones being two prize essays published in 1750 and 1773, which represent the negative side of his doctrine; *Héloïse*, 1761; *Emile*, 1762; *Le Contrat Social*, 1762; and his *Confessions*, which contain his constructive thought.

Rousseau was at first a contributor to the *Encyclopædia*, but at heart he cared nothing for the diffusion of knowledge and art. He did not understand the comprehensive intellectual ambition of Diderot; he resented the utilitarianism of Helvetius and the materialism of Holbach. When he wrote his prize essay in 1750, he suddenly perceived how absurd the intellectual Enlightenment was amid the distressing social state of France. He turned against both the existing order and the would-be intellectual reformers. The temporal order of things was to him awry. Study, knowledge, and cultivation were to him only a gloss over the deep-lying degradation. Society, as it is constructed, is artificial, and all organization is a tyranny. God exists, and He

is good. Man was good until civilization and art invaded his simplicity, corrupted his virtues, and transformed him into a suffering and a sinful being. Rousseau's call was that of anarchism. It was a condemnation of the entire past. Sweep all the so-called civilization away, and level inequalities. Go back to nature; and in the simplicity of that idyllic state let children grow up undirected except by their own uncorrupted instinct, — that "immortal and celestial voice."

In an age tired of oppression and corruption Rousseau struck a sympathetic chord which made the intellectual Enlightenment sound false. His contemporaries did not inquire into the motives of the mean lunatic. They did not then see that he was a doctrinaire holding up an unpractical ideal in contrast with their present state. He alone in all France was the one to appeal to man's self-respect. He alone appealed to the only motives that will result in action, — the human emotions. His plea was for every Frenchman, and his words for the unfortunate were given with such eloquence that the fortunate were compelled to listen. They were a majestic language of wide compassion and sympathy. He saw in the French monarchy the greatest misery for the greatest number, and no one of its supporters appeared to the people so generous and true as he. His influence not only upon his own time but upon the nineteenth century was extraordinary, and some have said that he is the greatest modern. At all events he sounded the keynote of our own civilization, especially in art, literature, and education; for he showed the fundamental correlation between Nature and the passions. Rousseau taught a sentimental deism, in which sentiment is the essential part.

The Revolution was the natural consummation of the Enlightenment in France. The immediate issues out of which it grew were the practical ones of finance, legislation, economics, and policy. The growth in the physical sciences (beginning 1760), in the study of political science, in the theory of government, as well as the financial distress of the French government, the success of the American Revolution, the advance of the French middle class to a position of power, the foolish and half-hearted measures of the French statesmen — all these were factors that at the end brought on the crisis. Yet the words of Rousseau, falling on fruitful soil, were the real cause. In the years immediately preceding the Revolution there was a world-wide agitation, an enthusiasm for nature, an exaltation of man, and a contempt for the age and for the society then existing. There was a vague presentiment of impending change, which most people were prepared to welcome. Thinkers were full of illusions. Even such despots as Frederick the Great, Catherine of Russia, and Joseph of Austria affected a radicalism, and Spain, Portugal, and Tuscany, as well as England, France, and Germany, were moved with great humanitarian sentiments. The debate was universal as to the condition of the human race. Rousseau was the eloquent expression of this world-wide movement.

The German Enlightenment (1740–1781). As the Enlightenment in France, so the Enlightenment in Germany had its introductory period. The history of Germany from the end of the Thirty Years' War (1648) to the publication of Kant's *Critique* (1781), or 133 years, is divided into two periods at the year 1740, when Frederick the Great was crowned. The period from 1740 to 1781, or forty-one years, is the German

Enlightenment. The period from 1648 to 1740, or ninety-two years, is introductory to the Enlightenment, and, as in France, a period of absolutism.

The Introductory Period (1648–1740). Absolutism. The spirit of absolutism, both politically and intellectually, dominated Germany from the end of the Thirty Years' War (1648) to the crowning of Frederick the Great (1740). Absolutism dominated Germany and France a full one hundred years. There are some differences between the two countries, however. It began and ended in Germany about thirty-five years later than in France. Again, in France it grew in splendor from the efforts of Richelieu and Louis XIII (1610) to the great protective idea of Louis XIV, who for seventy-two years ruled as absolute political and intellectual dictator. In Germany, on the other hand, it was a spectre hovering over a disintegrating and decaying nation once known as the Holy Roman Empire, but since the Thirty Years' War only a collection of states under a nominal central government. The idea of absolutism prevailed none the less, for within the several states each monarch was dictator as to the religious, intellectual, and political opinions of his subjects.

Politically and socially the Holy Roman Empire was in striking contrast to the power and splendor of contemporaneous France. The Thirty Years' War had left the empire absolutely desolate. The land was impoverished, the nation disrupted, and the population reduced from seventeen millions before the war to five millions after the war. The war had been a generation long and it had degraded the nation. It had settled nothing. It left the people poor and the princes absolute within their respective states. The upper classes

everywhere, except at Weimar, had become profligate. The universities were reduced to a position below what they were in the Renaissance. The prince of each state established the religion for his state, so that practically no religious liberty had been gained. Lutherans, Calvinists, and Catholics were exhausted, but were still antagonistic. There was no moral activity among the Orthodox; often they set their own immorality up to prove the absolutism of their respective dogma. The war left Germany politically prostrate and intellectually stagnant.

In the years that follow the Thirty Years' War it is possible to detect movements that are the beginnings of the Enlightenment. It is an important point that Germany was resuscitated from sources that lay within her own civilization. The French Enlightenment and the intellectual freedom of modern France were due largely to the influence of foreign ideas from England. The seeds of the German intellectual revival were developed on her own soil. Those beginnings are (1) the rise of Prussia; (2) the early German literature; (3) the Pietistic movement; (4) the transformation of Leibnitz's rationalism.

1. The rise of the little electorate of Brandenburg to the powerful kingdom of Prussia in 1740 was the political basis of the Enlightenment that followed. No state had suffered more during the Thirty Years' War. The entire population was reduced to less than a million, and Berlin, the capital, had only three hundred citizens. The government was as harshly absolute as elsewhere. The rights of the citizens were entirely taken away by the three princes who ruled over Prussia between 1648 and 1740. But a powerful kingdom

was built up, with a strong and patriotic army. It extended its dominions and was a refuge for Protestants, who fled to it in large numbers. It came to be feared by all the German states, and in the latter part of this period it had to be reckoned with in the councils of Europe. Itself an absolutism, it was the vigorous political body that alone could destroy the traditional absolutism of the Hapsburgs and the Holy Roman Empire. Puffendorf declared that the old Empire with its feeble sovereignties was a monster. It was a monster spectre — a stubborn political idea that hovered over Europe. Frederick the Great's mission in the next period was to destroy it.

2. The meagre German literature of this early period was also an important factor in the development of the Enlightenment. Poor, indeed, it was. Never was German literary production so low. Before the war the Germans had taken Greek as their model; after the war they copied the language, manners, and methods of the French of Louis XIV. The early literature was ruled in the same spirit of absolutism by Opitz until 1700, and after him by Gottsched, especially in the years from 1730 to 1740. It was for only a small fraction of the people, and was in the interests of the depraved aristocrats of the courts. Such pedantic absolutism was the basis of the reaction in the next period of the literary Enlightenment, which proved the redemption of Germany.

3. The Pietistic movement was the third factor that went to make up the German Enlightenment. It was a positive expression of religious individualism, similar in its position to the Prussian state in its independent growth in politics. It was a religious movement outside

the church. Its two leaders were Spener (1635–1705) and Francke (1663–1727). The movement entered Germany from the Netherlands; and the members were devout and holy men consecrated to good deeds. The Pietists were not heroic figures like the early Lutherans, but they stood for what Luther had in his early period taught. They opposed ecclesiastical formalism, and they proclaimed the need of personal regeneration and of the universal priesthood. They stood for religious freedom. They made no onslaught upon the church, but they were content with saving individuals. Pietism united at first with Rationalism — of which we shall next speak — against orthodoxy, but when the two had won their victory they quarreled. Although the Pietistic movement later became itself conventional, it furnished the ground for the religious freedom of the Enlightenment. During these hundred years of German religious absolutism, the Pietists represent the moral activity among religious bodies.

4 The chief source of the Enlightenment was the philosophy of Leibnitz. In turning back to the life of this distinguished German the reader will remember that he was the "first scientist in two hundred years," and that he was the Rationalist who presaged the Enlightenment. Leibnitz was born in 1646, just two years before the war closed, and he died in 1716, one year after the death of Louis XIV. He lived during those unfruitful years after the war and before the Enlightenment; and his philosophy stands out prominently from the low plane of the intellectual activity of that time. In 1686 he completed the construction of his philosophy by introducing the conception of the individual as a dynamic centre.

Many German philosophers, contemporary with Leibnitz, had later tried to free philosophy from its technical difficulties and make it readable for the people as the French Encyclopædia was for the French people. Among these were Tschirnhausen (1651–1708), Mendelssohn (1729–1786), and Tetens (1736–1805), but the German Enlightenment for many reasons did not come about like the French in the popularizing of philosophy. The philosophy of Leibnitz did reach the people directly, but the people were stirred through the medium of literature rather than of philosophy. Leibnitz's philosophy became the dominant thought only in the universities and academic circles, and remained so until the publication of Kant's *Critique* in 1781. Two Halle professors, Wolff (1679–1754) and Thomasius (1655–1728), developed and transformed it, not to its advantage, into an absolutism, and under the name of the Leibnitz-Wolffian philosophy it was the canon for the German schools. Once established in the universities it remained unchanged there even by the invasion of French thought that penetrated other German circles. Even Voltaire's residence at the court at Berlin (1750) had no influence upon the Leibnitz-Wolffian philosophy of the Berlin Academy. The dogmatic absolutism of this philosophy remained impregnable in academic circles and was the last to be dislodged — and then only by a German. There was little progress among these Rationalists, once their doctrine had been cast, except in incorporating in an eclectic fashion the doctrine of others.

Wolff systematized the unordered and desultory doctrines of Leibnitz for the purpose of teaching them logically. This was in 1706, when by the aid of Leibnitz

he obtained the professorship of mathematics at Halle. He met with instant success. The rationalism of his doctrine is seen from the title of many of his works, which are *Reasonable Thoughts on God, Reasonable Thoughts on the Powers of the Human Understanding*, etc. He lectured at Halle until 1723, when he was expelled by the theological influence. His return to Halle in 1740 was coincident with the crowning of Frederick the Great and the beginning of the German Enlightenment. We can note a few general aspects of his teaching. He employed the German language in his lectures, following Thomasius, who was the first to do it. Leibnitz had written in letters and treatises for the few, and had used either Latin or French. Wolff expanded Leibnitz's doctrine, broadly and superficially, for a larger public, in the German tongue. He systematized Leibnitz's teaching, and thereby could disseminate it. But in doing this he so toned down Leibnitz's leading ideas that they lost all their peculiar force. For instance, he taught that only the human mind has the power of representation; and again, that preëstablished harmony applies only to the relation of the soul and body of the human monad. In general, he so extended the Leibnitz principle of sufficient reason that it applied to all departments, and was reduced to the principle of identity. The world is a huge mechanism designed for divine ends. Rationality is assumed to be everywhere, and knowledge of its existence is to be obtained only by deduction from evident principles. The result was that the philosophy of Leibnitz was reduced to a commonplace and empty rationalism — a purely deductive affair. Wolff undertook to demonstrate everything, and to make intelligible what is above reason. The Wolffian philosophy was a reversion to

mediæval scholasticism, since it solved all problems by proof through the cogency of mathematical and logical processes. Truth is a matter of definition and classification. Thus Wolff produced a philosophy that was pedantic and formal, clear but shallow. It was Leibnitzian with Leibnitz omitted; it was a thorough-going dogmatism, because no problem was difficult to it; it was a rationalism, because to it all truth is the deliverance of the reason and none is derived from experience.

The Wolffian Rationalism became a factor in the German Enlightenment on the one hand by combining with Pietism, and on the other through its translation into the new German literature. In itself the Wolffian Rationalism was a dogmatism that merely supplanted the dogmatic scholasticism of Melanchthon and Luther. It lost its absolutism in its combination with Pietism, and became a personal and individualistic religion. It also lost its absolutism and became more like the philosophy of Leibnitz through its translation into the literary writings of Lessing and Herder; and thus was subordinated to an incident in individual culture.

Summary of the Literary Enlightenment of Germany (1740–1781). The German Enlightenment was thus made possible by the political growth of Prussia, by the development of a meagre literature, by the rise of Pietism, and by the Wolffian interpretation of Leibnitz's philosophy. All these were important features of the century following the Thirty Years' War. The year 1740 is the beginning of the German Enlightenment. It marks the crowning of Frederick the Great, the decline of the influence of Gottsched in literature, and Wolff's return to Halle. The arrival of Voltaire in Berlin (1750) is an important factor in the rise of the

German Enlightenment. The spirit of the Enlightenment was at its height twenty years later (1760), contemporaneous with the Seven Years' War (1756–1763) and with the publication by Lessing in 1759 of his *Letters concerning the most Modern Literature.* In these *Letters* Lessing gave the death-blow to Gottschedism, and established the Enlightenment on a firm basis. This was followed by the Storm and Stress movement (1773–1787), which brought the Enlightenment proper to an end.

1730–1750 Period of Experimentation — Gottsched, the Swiss, the Anacreonticists, etc.

1740 The Enlightenment inaugurated — the crowning of Frederick the Great, the decline of Gottschedism, the return of Wolff to Halle.

1750 The coming of Voltaire to Berlin.

1751–1780 Lessing and the Enlightenment.

1773–1787 Storm and Stress Period. — The Enlightenment proper at an end.[1]

1787–1805 Classicism. (Schiller d. 1805).

1795–1850 (approximately) The Romantic Movement.

1850– The Realistic Movement.

The Political Enlightenment of Germany — Frederick the Great. Political changes preceded and did not follow philosophical theories in the German Enlightenment. Germany was therefore like England and unlike France in this respect. The coming of Frederick to the throne of the now powerful Prussia, the reforms that he inaugurated, the religious toleration that he granted, his recall of Wolff to Halle, his avowed support of in-

[1] In a real sense the German Enlightenment has never come to an end. Classicism and the Romantic movement were a continuation of it.

tellectual things, and especially the Seven Years' War (1756–1763) were the political groundwork that made possible the Enlightenment in Germany. Frederick himself is the great figure in the German Enlightenment, just as Voltaire is in the French. Frederick accomplished in concrete acts for political Europe what Voltaire accomplished for ecclesiastical Europe. Voltaire destroyed the ecclesiastical absolutism of the spiritual power, while Frederick destroyed the absolutism so long connected with the name of the Holy Roman Empire and the House of Hapsburg. Before he died, he had freed the German states from the dominance of Austria, and had given to the Empire its death-blow. In the Seven Years' War he had given to modern Europe an example of a new political ideal in an autocrat who professed to be the servant of the State. His whole thought was upon the advancement of his State. He set up the principle of the equality of his subjects before the law, and the principle of religious and philosophical liberty. In his external struggles with Austria and in the internal construction of his kingdom Frederick is the protest of the Enlightenment against the arbitrary despotism of political Europe. The example of Frederick was an inspiration to all Germany. Kant calls the eighteenth century the Age of Frederick the Great. Frederick had made his subjects feel that they were Prussians, or, as Goethe puts it, "Fritzche" (Fritz's men); that the great foe of the German people was the German Empire as personified by the Austrians and Saxons. When he had conducted to a successful issue a deadly war of seven years single handed against the combined force of more than half of Europe,—Austria, Russia, and France, all representing political

absolutism, — he inspired patriotism not only in his own subjects, but in the people of many other German states. Reforms were undertaken in Bavaria, Baden, Saxony, Brunswick, etc., and by Catherine of Russia and Joseph of Austria.

Furthermore, Frederick himself was personally enlightened; he looked upon himself as the greatest among those of enlightened intellects. He had become denationalized by his early training. His father was fond of what was German, his mother of what was English, and he himself of what was French. He had studied Bayle, read French philosophy, and become acquainted with the rationalism of Wolff and the empiricism of Locke. He was at one time an atheist and materialist; but deism was his natural attitude of mind, for he emphasized morality above speculation. Conceiving himself, as the most enlightened, to be the great servant of the State, he undertook the enlightenment of his people. All Prussia must be enlightened by him, and therefore no restrictive institutions, such as guilds and corporations, could be permitted. The best man should rule, and he was the best man. Since the people are incapable of looking after themselves, they must be compelled under his benevolent autocracy to be enlightened, rational, and happy.

The Course of the German Enlightenment. Why did not the movement become as in France a political revolution? There are three reasons why it did not: (1) the reforms that the German princes adopted were wise; (2) Germany was composed of segregated states in which concerted action was difficult; (3) a new intellectual and æsthetic current was begun by Lessing, of whom we shall speak. There is no doubt

that the Enlightenment in Germany pointed to the same result as in France. From 1760 to 1780 it looked as if Germany as well as France would witness a tremendous social upheaval. From 1773 to 1787, Germany was stirred by the Storm and Stress movement. Frederick himself had pointed to the English parliamentary government as the "model for our days." The most of the German thinkers were at heart republicans, — Klopstock, Schiller, Kant. Every man in Germany became a little Frederick, and tried to enlighten those who were inferior to him. The movement extended to the schoolroom. Secret societies were formed of kindred enlightened souls to enlighten the world. The most important of these societies was the Illuminati. The aim of these was to free men from national and civil ties, from pedantry, intolerance, political and theological slavery. The human heart is the basis of society, and the only worthy object of study. The Illuminati included even princes among its members. It was established in 1776 and prohibited in 1786. There was a distinctive Storm and Stress literature. This was set in motion by Rousseau's *Héloïse* and *Emile*, which were widely read in Germany. Writers glorified the individual, called men back to primitive and uncorrupted nature, denounced civilization, and for twenty years it almost seemed as if the German Enlightenment had turned from the intellectual achievements of Lessing, and would follow the sentimental appeal of Rousseau. Herder was particularly prominent in this movement, also Goethe and Schiller in their early writings.

Of the three factors that saved Germany from a political revolution, perhaps the most potent was the new, fresh, literary ideas of Lessing. If Frederick is the

originator of the German Enlightenment, Lessing is the savior of it. The Enlightenment in England stopped with the phenomenalism of Hume, in France with the Revolution, but in Germany it has in a sense continued even to the present day. The classic period of Goethe and Schiller, the modern scientific achievements of the Germans, have their perpetual source in Lessing. He not only gave the death-blow to the pedantic absolutism of the intellectual past, but he set the movement upon a permanent intellectual basis, upon which it has stood against the assaults of sentimentalism for a hundred and fifty years.

Lessing. G. E. Lessing (1729–1781) was not only a sound scholar, but a polished man of the social world. He was a writer of epigrams, fables, and comedies, a dramatic and literary critic, a translator and essayist, a student of philosophy and ecclesiastical history, and a writer upon art. His *Nathan the Wise* is, after Goethe's *Faust*, the greatest literary production of German thought. With him German literature begins. He rejected the French models accepted by Gottsched; he introduced Shakespeare to the Germans; and he surpassed all his contemporaries in literary and artistic reform, social enlightenment, and religious emancipation. Lessing and Winckelmann were the first to spread a love for the past by a critical study of it. Lessing was not a violent iconoclast like Voltaire, but a discriminating critic. He said that if Leibnitz had wished for an interpreter, he would not have chosen Wolff. The new literary writers, Lessing and Herder, in their insistence upon subjectivity and intuition, rather than Wolff, were the true interpreters of Leibnitz. Lessing differed from the Enlightenment in his conception of

the present in its continuity with the past. Herder, too, was interested in development. Lessing pointed to the perfect models in the past; Herder to the origins of things. Both believed in an immanent God and the harmony of the universe. At this time the problems in æsthetics came to light, and with them the creation of "world literature," which drew from all historical thought — from antiquity, the Renaissance, and the Enlightenment. The Pietists, the Wolffians, and the literary writers agreed in taking the subjective point for their view of life. Thus Leibnitz appears through Lessing as a motive power in the German Enlightenment. Lessing's doctrine of individuality so transcended that of the Storm and Stress Period that he was not understood by it. His enlightened individual suppresses his individuality. But his principles were so fundamental that the Storm and Stress Period proved to be only an interruption, and the German Enlightenment was perpetuated. He thus projected himself beyond the eighteenth century by the instruments of that century.

CHAPTER X

KANT*

The Convergence of Philosophical Influences in Germany. The intellectual thoroughfare from the past into our modern times does not pass in the eighteenth century through England, nor yet through France, but by way of Germany. Traditional France ended with the French political revolution, while the English empirical movement proved its own inconsistency in the phenomenalism of Hume. In Germany alone, at the close of the eighteenth century, there was a renewed and brilliant intellectual life. In its creative productions it has been compared by the Germans to the Systematic Period of Greek thought (from the death of Socrates to that of Aristotle). Both periods appeared when the political fortunes of the respective countries were at their lowest ebb.

There were six large influences that converged upon this epoch, some of which we have already noted as beginning even as far back as the period introductory to the Enlightenment (1648–1740) (see pp. 217 ff.). Some are later in their origin or come from a foreign source. Let us merely enumerate them here.

(1) Pietism, the religious influence that began with Spener (1635) and swept Germany in the eighteenth century; (2) The sentimentalism of Rousseau; (3) The empirical psychology of Locke among the younger

* Read Windelband, *Hist. of Phil.*, pp. 529–531.

Germans; (4) The Rationalism of the Leibnitz-Wolffian philosophy, which was most powerful in academic circles; (5) The mathematical rigorism of the nature-philosophy of Newton; (6) The new literary writers in their insistence upon subjectivity and intuition.

The Three Characteristics of German Philosophy. German philosophy will be seen to have three characteristics. (1) It is scholastic or academic. It is the philosophy of the professors of universities. At the same time it must be said to be the expression of the social genius of the German people. Napoleon testified to this when he said, "The English inhabit the sea, the French the land, the Germans the air." (2) This German philosophy is mystical. It is profound rather than external. It is not founded upon external experience, but upon a questioning of the inner and spiritual life. It is inward, religious, and spiritual, like the philosophy of Plato. One of the most accurate interpreters of Kant has pointed out the many similarities between Kant and Plato (see Paulsen, *Immanuel Kant*). (3) German philosophy was nevertheless cosmic, or a description of the world. These men whom we are now to study were not ignorant of the world or of science. Political life offered them no attractions. The soul of man was regarded by them as too noble to be engrossed in external things. As Madame De Staël said of the time, "There was nothing to do save for him whose concern was with the universe." Men, however, took the inner point of view, and regarded all things with reference to it. The Germans tried to humanize the universe. They looked upon nature as working out unconsciously those processes which consciously took place in man. The contemplation of beauty is not that

of an external world, but of the inmost nature of reality. Thus individuality and cosmic reality are one and the same. Life has a joyful outlook, not because our tasks are easy, but because our strength is equal to them; for is not God in us?

The Two Periods of German Philosophy. German philosophy is divided into two epochs: (1) the period of the formation of the critical theory of knowledge by Kant; (2) the period of the metaphysical idealism of Fichte, Schelling, Hegel, Herbart, and Schopenhauer. Kant belongs both to the Enlightenment and to German idealism. He is the point of convergence of the intellectual forces that preceded him and the point of departure of the idealists who followed him. For this reason historians differ as to the period in which he is to be placed. In one sense he is the transition from the Enlightenment, in another sense he is the introduction of German idealism. But in reality he forms an epoch between the two. Although the dualism, which was always the background of the philosophy of the Enlightenment, formed too the background of his thought, although he on the other hand looked upon his *Critique of Pure Reason* as only an introduction to a metaphysics, which he never wrote, nevertheless he occupies a unique place in drawing up for his time and for the future a new conceptual standard by which the new problems might be criticised. The problem that Kant set before himself was epistemological and not one of metaphysics.

After Kant there appeared a growth of metaphysics. The great German idealistic systems appeared. At first the Kantian theory was misunderstood, but at Jena, then the chief intellectual centre in Germany,

there was formed a little group of Kantians under the leadership of Rheinhold. Jena is near Weimar (see map p. 280), which was the main literary city of Germany, and the residence of Goethe. The poetry of Weimar and the philosophy of Jena stimulated each other. Schiller is a notable example of the influence of Kant upon the literature of the time. In philosophy Kant was followed by the various systems of Fichte, Schelling, Hegel, Herbart, and Schopenhauer, which built a metaphysical superstructure upon the Kantian foundation.

The Influences upon Kant. The development of Kant's thought was modified by influences from at least five different sources.

1. *Pietism.* This was the earliest influence upon his life, and was due to his parents and to F. A. Schultze, the teacher of the high school of Königsberg. It will be remembered that this ethical Puritanism was a moral reaction against the formalism of the churches in the period after the Thirty Years' War. Kant never lost his attachment for the Pietists; and his later rigoristic ethical theory, as well as his own personal life, sprang from his early Pietistic training. Schiller wrote to Goethe, "There is always something about Kant, as about Luther, which reminds one of the monk, who has indeed quitted his cloister, but who can never quite rid himself of its traces."

2. *The Leibnitz-Wolffian Philosophy.* This influence came during his academic training in the University of Königsberg, which he entered upon at the age of sixteen years. This was in 1740, the same year in which Frederick was crowned and Wolff was recalled to Halle,—the time when the Leibnitz-Wolffian philo-

sophy was at the fullness of control of Germany. It must not be forgotten that this philosophy remained dominant in German academic circles until Kant's own theory supplanted it in the nineties. Kant was an avowed disciple of the Wolffian school for the next twenty years (until 1760), and he never shook off the Wolffian metaphysical dualism.

3. *The Physics of Newton.* To his university training Kant was indebted also for his acquaintance with Newton. The antagonism between the metaphysics of Wolff and the physics of Newton was, at least at the beginning of Kant's career, of decisive importance in his development. One of Kant's teachers at the university was Martin Knutzen, whose lectures included philosophy, mathematics, and natural science. Through personal intercourse with Knutzen, the young Kant was introduced to the Wolffian philosophy, and also to the Newtonian mathematics and physics. During his activity as a teacher Kant showed, even into his later period, a predilection for natural science, especially for physical geography and anthropology. The same year in which he entered upon his career as teacher in the University of Königsberg (1755), he published his celebrated *Theory of the Heavens*, in which he anticipated Laplace by forty years in the formulation of the nebular hypothesis.

4. *The Humanitarianism of Rousseau.* Kant got from Rousseau a new evaluation of man. Kant had the advantage of a prolonged youthful development. He was well into his thirties when the movement, begun by Lessing, became a social force in Germany. A new political consciousness appeared among the German people, due to the influence of Frederick the Great and to that

of the Frenchmen, Voltaire and Rousseau. Kant was thirty-eight (in 1762) when he read Rousseau's *Emile*. Kant had been brought up in the common teaching of the early part of the Enlightenment to despise the ignorant masses of people. Through Rousseau he received in words of authority the conception of the inherent dignity of the individual man. Through this conception science and speculation came to have a new value to Kant. They were no longer ends in themselves, but the means for moral development. The moral in its primacy over the intellectual came to be a permanent feature in Kant's doctrine. His early Pietism was confirmed, and Rousseau replaced Newton in his regard.

5. *The Skepticism of Hume.* The influence of Hume's skepticism was felt by Kant just before his eleven years of silence, when he became engaged in his construction of his critical problem. But Hume influenced Kant in a negative way. The classic and oft-quoted expression of Kant, that Hume awoke him from his "dogmatic slumber," refers to the dogmatism of the empirical school to which Hume belonged, and not to that of the rationalistic school of Wolff. To Kant both empiricism and rationalism were dogmatic; the one because it assumed the validity of sensations, the other because it assumed the existence of innate ideas. Thus Hume effected a reaction in Kant against Hume's own doctrine. But in thus reacting from Hume, Kant saw that the answer was to be found not in the rationalism of Wolff, but in an ideal conception of space and time. Hume's influence was the last before Kant firmly established his theory of knowledge in his *Critique of Pure Reason*.

The Life and Writings of Kant (1724–1804). The

external changes in the life of Immanuel Kant were the fewest possible. He was born at Königsberg in 1724; he went to the school of that city and then to its university, and then acted in the capacity of tutor in families in the province of Königsberg. He became privatdocent in the university at the age of thirty-one, and professor of logic and metaphysics at the age of forty-four. He was called to the University of Halle in 1778, but he refused to leave Königsberg. In fact, Kant never went outside the province, and but little outside the city. Nevertheless, in the eighties he saw himself become the most important figure in Königsberg, and in the nineties the most important power in German academic circles. In 1788 he came under the censure of the reactionary government of Frederick William II and "was obliged to refrain in the future from all public addresses on religion." This was the only outer conflict in his life. In 1804, at the age of eighty, he died. The externals of his life were from the beginning to the end an undeviating routine, — his lectures, his daily walk, his dinner with friends, his hours of reflection upon his great problem. These have been made the subject of many descriptions.*

The life of Kant is notable because it is the history of an unusual singleness of devotion to the solution of a speculative problem. His youthful point of departure was the rationalism of Wolff; his point of attainment

* Read the quotation from Heine in E. Caird, *Phil. of Kant*, vol. i, p. 63; Stirling, *Textbook to Kant*, Biographical Sketch; Royce, *Spirit of Modern Philosophy*, chap. iv; Windelband, *Hist. of Phil.*, pp. 532–534; Rand, *Modern Classical Philosophers*, pp. 376–405, 420–424; Eucken, *Problem of Human Life*, pp. 435–452.

was the *Critique of Pure Reason.* Between these two points his history was a series of mental reversals. Kant spoke of his life as divided into two parts at the year 1770; his pre-critical and his critical periods. At that time there was a change in the form as well as the content of his writings. His pre-critical writings possess a graceful, flowing style; his critical works are heavy and artificial in their structure, and reveal the labor with which his thought tried to reconcile contending *motifs.* So far as the content of Kant's thought is concerned the pre-critical period will be seen to fall into two subdivisions at the year 1760. Kant's life may therefore be divided into three epochs: (1) 1724–1760, the period when he was a Wolffian rationalist; (2) 1760–1770, the period when he was an empirical skeptic; (3) 1770–1804, the period when he was a critical epistemologist.

In the first period he accepted the rationalism of Wolff, but his main interest, as shown by his writings, was in natural science. He was inspired by the natural philosophy of Newton, which, in the latter part of this period, led him to mistrust the metaphysics of Wolff. That is to say, he began to suspect that the mere logical operation of concepts by the "pure reason" could not be a statement about things in the real world. In the next ten years — his second period — he became convinced that the metaphysics of the rationalists was impossible, and yet that the metaphysics of the empirical school of the English was equally absurd. His writings during this time are more strictly devoted to questions of metaphysics and epistemology. Then came his critical period. This was inaugurated by his celebrated Dissertation of 1770, followed by a period of eleven years of literary silence,

a silence broken by the publication of his *Critique of Pure Reason* in 1781. Between 1781 and 1790 appeared the more mature works from Kant's pen. Among them were the *Critique of Practical Reason* (1788) and the *Critique of Judgment* (1790), formed on the model of the *Critique of Pure Reason.* Besides these, his minor writings were very numerous, and one notes an essay by him in the last year of his life. But the writings of Kant after 1790 treat in the main of the philosophy of law and conduct, and show themselves to be the writings of his declining years.

The Problem of Kant. The problem which Kant placed before himself was that of epistemology. Epistemology is the theory of knowledge, and Kant set to work to investigate the knowing process. The peculiar significance of Kant rests upon the fact that out of the various influences converging upon him and his time he matured a new conception of the problem and of the method of procedure of philosophy. He was convinced that the problem of his time was not one of metaphysical speculation, although he felt the value of such speculation in the regions of religion and morals. Yet he saw that the metaphysical rationalism of Wolff had proved itself inadequate because it was merely the logical operation of concepts, and had not dealt with real relations. He was equally sure that the empirical metaphysics of the Englishmen was inadequate because it was never certain of any truth. Rational metaphysics was logically true, but not real; empirical metaphysics was real enough, but never true. So Kant determined to find out the relation between the logical process of thought and the reality of things. He felt that the first problem in his time to be faced and settled was the prob-

lem of knowledge, — the epistemological problem. He planned to face later the metaphysical problem, but he delayed this until too late in his old age. The problem of Kant can be put in the simple question, What can we know? The metaphysical problem that he deferred was, What is real? Yet his problem was not nearly so simple as this statement would seem to make it; for the epistemological problem which he set himself was complicated by the Wolffian metaphysical dualism which he always presupposed. Since Kant agreed with the Wolffian dualism — the theory that a great gulf separates mind and matter — his query about knowledge was not the simple question, What can we know? but the longer question, What can we know about the external world?

The Method of Kant. There is bound up with the epistemological problem a new method of procedure in solving it. How shall we find out what we can know? Kant calls his method the critical method. It is not only a criticism in a general sense, in that it weighs carefully the conditions of knowledge. It is also criticism in the special sense of confining itself to a restricted field. Kant pointed out that two methods may be employed, the dogmatic and the transcendental. He asserted that the dogmatic method had been employed in the past and had proved itself fallacious. What is the dogmatic method? All philosophy was dogmatic to Kant which sought to find out what knowledge is true by showing how it originated and developed. Dogmatism is no solution; it is merely a psychological tracing of ideas to their sources. These sources will be either innate ideas, if we are rationalists, or sensations, if we are empiricists. *The true method is the transcendental or critical*

method. What is this method? It is a study of the nature of the reason itself. It is an examination of the "pure reason" to see if its judgments have in any instance a universality beyond human experience, and yet are necessary to human experience. The logic of such judgments must be absolutely reliable; and yet at the same time the judgments must be applicable to the world of things. The method being transcendental, such judgments are transcendental; not because they transcend our experience, but because they are necessary to experience. The transcendental is not what is chronologically but what is rationally *prior*. The transcendental is the indispensable to knowledge. The critical method is the finding of this indispensable condition. Kant would search the whole field of the reason for this. Since to Kant thinking, feeling, and willing are the fundamental forms of the reason, he sought the realm of thought for the transcendental principles of knowledge, that of the will for the transcendental principles of morality, that of feeling for the transcendental principles of beauty.

The Threefold World[1] of Kant—Subjective States, Things-in-Themselves, and Phenomena. In his search for those indispensable conditions of knowledge of the external world, Kant unfolds the threefold character of the realm of human life. To Wolff the world had been twofold. In other words, Wolff had conceived the world as dual, in which there was a correspondence, part by part, of independent reality to the states of consciousness. To Wolff reality is independent of consciousness, and yet we are conscious of that reality.

[1] The word "world" is used for lack of a better. The reader is, however, again reminded that Kant's problem is one of epistemology and not of metaphysics.

Now Kant never gave up entirely the Wolffian dualism, but he came to see that in such a situation there could be no knowledge. For how can we be conscious of what is absolutely independent of us? Consequently Kant plundered the Wolffian worlds of independent realities to build up an intermediate world, — a world of phenomena. He dissolved the sharpness of Wolff's dualism into a world with three divisions; and he gave to each division a new epistemological value. These were the realm of the subjective states or the inner consciousness of the individual, the world of phenomena or the realm of knowledge, and the world of absolute reality or that of things-in-themselves. The value of the world of phenomena consists in its being the realm of knowledge. The other two realms have values of their own, which we shall describe below.

Wolff's twofold world may be thus compared with Kant's threefold world: —

Wolff.	Kant.
1. Mind.	1. Subjective states.
	2. Phenomena — the realm of knowledge.
2. Matter.	3. Things-in-themselves.

1. The realm of subjective states evidently is not a realm of knowledge. For it is the realm of intuition and immediate apprehension of the individual's own ideas and sensations; and this is not what we mean by knowledge. This subjective world is that in which I live alone. It is a realm of which nobody else is conscious, a realm which gives to me my individuality. The only connecting linkage between my various purely subjective states is the accidental order of time in which, empirically or by association, they occur. Animal intel-

ligence possesses only such sense-perceptions and sensations, and these are modifications of its subjective consciousness. Such a mental constitution has not the capacity for knowledge, but only the haphazard association of ideas. Kant looked upon the content of subjective consciousness as the object only of psychological investigation.

2. The realm of things-in-themselves is not to Kant the realm of knowledge. By things-in-themselves Kant distinctly does not mean things-for-us, not material bodies, not nature objects. It must be remembered that Kant has plundered the material realm of the dualist. The things-in-themselves which are left behind as a residuum lie outside all sense-perception and so beyond all knowledge. A divine intelligence might have the things-in-themselves as objects of knowledge, but not we human beings. The thing-in-itself is the unknown and unknowable. But if this realm of things-in-themselves is so absolutely independent of us that we cannot in any way know it, how can we say that it exists? Kant replies to this: while we cannot say *what* a thing-in-itself is, we are obliged to say *that* it is. For although beyond even our sense-perception, it stands as a necessary postulate to perception, as a mere "problem." Kant also calls things-in-themselves Noumena, and regards them as "limiting concepts" to the divine non-sensuous intelligence. Their reality is as little to be denied as affirmed.

3. Kant pointed out that between or beside the realm of subjectivity and that of the things-in-themselves lies the realm of human knowledge, which we in our every-day speech call physical nature, and to which he gave the name "the world of phenomena" or "the

world of experience. The subjective world is apprehended by the individual alone, the world of things-in-themselves is known by no human being, but the world of phenomena is the common object of knowledge of humanity. Phenomena are not things-in-themselves, but things-for-us; they are physical nature, an interrelated totality for us. They constitute not absolute reality, but a reality relative to us. Phenomena are experiences in their relations; such related experiences are objects of knowledge, and in their thoroughly organized and systematic form they constitute nature.

Thus the dualism which we ordinarily meet, like the "two world" theory of Wolff, has many differences from this critical theory of Kant with its threefold divisions of one world. One of the most important is that in Kant's theory the correspondence between states of consciousness and reality has disappeared. Reality touches consciousness only at one point, — at that point where sensations arise. Sensations mark the boundary between unknown reality and conscious life. On the side of reality all is darkness; on the side of conscious life all is the creation of our complex synthetic activity. With the boundary line of sensation as a base, the two realms extend in opposite directions. In value the realm of our conscious life is only relative; that of reality or things-in-themselves is absolute.

The World of Knowledge. There is this to be observed about the threefold realm of Kant: the realm of subjectivity and that of knowledge together make up our conscious life. One is the realm of the conscious individual, and the other the realm of the consciousness of humanity. Kant conceived this further distinction between the two realms: in a purely subjective state

the mind is entirely passive and its content is without control; in a state of knowing the mind is actively engaged in collecting and relating its ideas. This is called by Kant synthesis.

When Kant was formulating his problem, there gradually came to him in clearer outline the synthetic nature of the activity of the human reason. He felt more and more that the secret of the knowing process was to be explained by its function of combining many experiences into a unity. This conception of synthesis is what separates the *Critique of Pure Reason* from all the previous writings of Kant. Furthermore, the three books of the *Critique* are expositions of the different stages in which mental synthesis completes itself: in (1) perception, (2) understanding, and (3) reason. The knowing activity of man develops in these three different forms of synthesis, in which each lower stage is the content of the higher.

What, then, is the central factor in knowledge? It is the synthetic power of the mind. The mind is not merely passively aware of its sensations as they come *seriatim*, but it actively relates them and holds them together. The mind is a dynamic agent whose activity consists in synthesizing in the present moment its experiences of the past. The human mind is not like a curtain upon which stereopticon pictures appear and then disappear in turn. It retains its pictures, although they are no longer being thrown upon the screen. Suppose we hear the ticking of a clock. Now if we had no synthetic power, all we should apprehend would be one, one, one, — and so on. But we do have synthetic power, and we say one, two, three, and so on. We count in a series in which each term includes the preceding

term. Two includes one, and three includes two, etc. This is knowledge. It is cumulative experience. The experience of twenty animals, each having one experience, is not the same as the experience of one man having twenty experiences. In vain would nature act on man if the mind of man through memory and imagination did not carry over experiences. So the important thing is not what happens, but what power the human mind has. Knowledge, then, to Kant is the unifying of the manifold.

There are, therefore, two aspects to knowledge; the passive sensations and the active power of synthesis. Sensations, on the one hand, are the raw material out of which reason through its various forms creates the finished fabric of knowledge. Sensations are the content of knowledge. On the other hand, there is the active unifying power of the reason. *Knowledge consists of sensations and synthesis in conjunction.* Reason alone deals with "thought relations" or imaginations, whenever it tries to treat objects of which sensations are not the raw material. Sensations alone, however, are only subjective states. The oft-quoted sayings of Kant, that "Only in experience is the truth," and that "Conception without perception is empty, perception without conception is blind," refer to the restriction of knowledge to the sense-materials and to the synthetic function of the reason.

The Place of Synthesis in Knowledge. What position does synthesis occupy in the total process of knowledge? Is synthesis one of the factors or elements of knowledge? Is synthesis on the same level with the sensations, the feelings, the imaginations? No, it is very different. The synthesis that Kant is describing is

not the product or conclusion from an inference. Kant does not mean by synthesis the combination of facts as a result, such as a biologist might make in framing the law of the habits of animals from his observation of them. The synthesis that Kant is talking about is not so much the result of combining experiences *as the act of combining them.* The frame of the unified manifold, the law of its unification, the act of binding the isolated experiences together is synthesis. Synthesis occupies a higher level than the elements of knowledge or knowledge itself. Synthesis is the knowing process rather than the known product. It is constitutive; it is creative; it conditions experience and puts the material of experience together. It must not be thought to be a voluntary act of the mind, which the mind will or will not do, as it pleases. When the mind acts, it synthesizes.

Furthermore, the synthetic functioning of all human minds everywhere is the same. However much their sensations differ, they combine and orderly arrange their sense-materials in the same ways. The synthesis of the human mind is the source of the universality belonging to knowledge; the sensations, the "given," are the source of the difference in knowledge. Knowledge is the result of minds that function in absolutely the same ways; and we should never have knowledge if the order and linkage of the world depended on the accident of experience. Take, for example, such laws as those of mathematics or the physical law of cause. These are the same for everybody. They are universal laws. The ordinary conception of them as independent principles of an independent nature world will not account for their necessity for everybody and their universality. As independent principles they would differ for different peoples just

as sensations differ. In that case we should have no knowledge. Human beings could not then think about the same things, nor reason under the same guiding principles. However, we do think alike, we have the same geometry, the same physical laws, the same time-estimates; and simply because we function alike synthetically. Knowledge is thus the common possession of humanity because the synthetic functioning of the different individual men is identically the same.

A very good way to get at Kant's central principle of synthesis is to draw this picture. Suppose that besides the race of human beings with its own peculiar way of ordering its world, there were a race of angels endowed with its own powers, another of hobgoblins likewise endowed with its own powers, and so on to x, y, and z races — any number you please. What would be the situation? In the first place, each one of the groups would be absolutely isolated from each of the others. No one would have the power to know even the existence of the others. No one race would even have anything in common with the others. The world of each would be different. In the next place each would be trying to interpret reality, and in doing so, each would construct and order a world of reality of its own. The members of each race would have a world in common and the members would know one another. But that is all. The members of each race would not be able to get outside their own powers of synthesis. In Holy Writ the home of the angels has been sometimes described as having no time and space, but this means only that space and time are aspects of our mental synthesis and not of theirs. We live in our world of our interpretative construction of reality, and they in theirs. The same would

have to be said of x, y, and z. None would live in a world of absolute reality. But each would live in a world made different from all the other worlds by the differing mental powers of each race. Yet the members of each race would inhabit a world in common because the individuals of each had common mental powers. The particular world that human beings inhabit is called physical nature, whose laws are known as the laws of science. How can it be *one* world in which so many millions of different human beings live? Because these millions of human beings are under the same fundamental rational laws, and they construct the world in a common fashion. The laws of nature are, after all, the laws of our own minds. They are the laws of reason. The laws of nature are not the laws of absolute reality, but the laws of the human interpretation of reality. All the linkage of facts, all the law and order of our universe, all the combination of the variety of objects of knowledge — in a word, the entire body of science or the world of physical nature is a human mental synthesis. Does independent absolute reality exist? Yes; but it exists behind the scenes for us as for the angels. Mental synthesis is constitutive of the world in which we are actually engaged — mental synthesis is shot through and through all our experiences. Mental synthesis is the framework of the universe, and therefore Kant says, "The world is my representation."

The Judgments Indispensable to Human Knowledge. It will be seen from the above discussion that Kant does not believe that an idea or a sensation taken by itself constitutes knowledge. Knowledge consists of sensations framed together in a synthesis. That is, ideas must be taken together with other ideas. This is

called in grammar a proposition, having a subject and a predicate. In logic it is called a judgment. The only way a human being can express knowledge is in the form of judgments, but all judgments of human beings are not necessarily knowledge.

Judgments are divided by Kant into two large classes, — analytic and synthetic. The large class of analytic judgments are not expressions of knowledge. What is an analytic judgment? An analytic judgment merely expresses in the predicate something that is contained in the usual meaning of the subject. Such a judgment articulates the meaning of an idea by emphasizing some of its well-known attributes. Thus we say, "Gold is yellow." Such a statement about "gold" does not show any knowledge. It is called sometimes an explicative statement. It is tautologous, but not on that account trivial. Let us look then to synthetic judgments to see if they express knowledge. But first, what is a synthetic judgment? A synthetic judgment is one in which the predicate is not contained in the usual meaning of the subject. It is a statement of something new about the subject in hand. For example, the judgment, "The watch is yellow" is a synthetic judgment because the predicate "yellow" is not a necessary part of the meaning of "watch." A synthetic judgment therefore brings two ideas together in a new relation. It thereby enriches knowledge and is the expression of discovery. The synthetic judgment is often called ampliative. (The double meaning which Kant gives the term "synthetic" need not confuse us. Synthesis is used by Kant to mean the framing constitution of the mind, and also as one of the results of the activity of the mind, *i. e.* a class of judgments. In the first sense all

judgments, both analytic and synthetic, are expressions of synthesis.)

Are all synthetic judgments expressions of knowledge? Kant replies that they certainly are not. He points out that there are two classes of synthetic judgments: one class he calls *a posteriori* and the other *a priori*. By *a posteriori* he means judgments founded in some sense-perception, which are particular judgments or judgments that are inferences from a greater or less induction of sense-perceptions. For example, if I say, "To-day is warm," or that "Swans, so far as I have observed, are white," I am making a synthetic judgment, because I am joining two ideas in a new relation, and I am also making an *a posteriori* judgment, because it is a statement founded upon sense-perception. Now Kant rules such judgments out from those that constitute true knowledge. This would rule out even empirical generalizations of high probability, such as "The sun rises in the east." *A posteriori* judgments, or those founded on experience, however large, do not give us knowledge, but merely probability. The cases upon which such judgments are founded are always limited, and there may be exceptions beyond our observation.

The only kind of judgments that are the expression of true knowledge must, therefore, be synthetic judgments that are *a priori*. That is to say, they must express some new relation between ideas that is also universally and necessarily true. By *a priori* Kant means the universal and necessary; and, furthermore, he maintains that the universal and necessary, and nothing else, constitutes knowledge. He points out that we make such judgments. When we say that the three angles of a triangle equal two right angles, or that every event has a

cause, we are saying something universal and necessary, something not founded on experience. No one would admit that there were exceptions to these propositions. The question, then, that Kant tries to answer in his *Critique of Pure Reason* is, How are synthetic judgments *a priori* possible? Or since to Kant knowledge consists of synthetic judgments *a priori*, under what conditions is knowledge possible?[1]

For the sake of clearness, let us state this problem of Kant in another way. It is the nature of man to try by mere thinking to discover the nature of reality. The dogmatic school of Rationalists had attempted, without calling in experience to its aid, to weave out of pure thought answers to the questions about God, immortality, and nature. It had maintained that clear and distinct notions have a reality corresponding to them, and are therefore real. Judgments formed in this way are analytic *a priori;* but it is evident that while such analyses of thought have a cogency for thought, they do not necessarily have a corresponding reality. On the other hand, conclusions based on experience have a kind of validity for the real world, but they yield no certain truth about it. These are synthetic judgments *a posteriori.* If Hume is right in saying that these are the only judgments dealing with nature, then we have no certain truth about nature. They give generalizations that are useful on the whole, but their conclusions range only from possibility to high probability, and never

[1] Paulsen says (*Immanuel Kant, His Life and Teaching*, p. 135) that this formula of synthetic judgments *a priori* appears only in the introduction to the *Critique* and in Kant's later writings, and it would have been no misfortune if Kant had never discovered it. But Windelband (*Hist. of Phil.*, p. 533, n. 2) says, "No one who does not make this clear to himself has any hope of understanding Kant."

reach certainty. Besides (1) conceptual knowledge and (2) "knowledge of matters of fact," Kant pointed out that there is a third kind. This is the only valid kind. This knowledge is based on synthetic judgments *a priori*. Such knowledge arises independently of experience, *i. e.* is *a priori*, and yet is valid for experience, *i. e.* is synthetic. Hume's statement that such knowledge is synthetic *a posteriori* is not accepted by Kant. Kant is, therefore, bound to show how this third class of synthetic judgments *a priori* is possible, and how pure thought can be binding on experience.

The Proof of the Validity of Human Knowledge. If we turn now to review what we have said about Kant, we find that he undertakes to solve the problem, *How can we know?* by a critical study of the forms of the reason. We have found that the reason is essentially a synthetic power, and is the framework of the world of phenomena to which knowledge is limited. Knowledge is the complex thing, consisting of sensations as its woof and synthesis as its warp. To answer the question, Under what conditions is knowledge possible? we must study not sensations, but synthesis in its several forms. If Kant can show that the mind furnishes the *a priori*, that is, the universal and necessary forms to knowledge, he thinks he has proved his case. He has then explained why human knowledge is valid and thus proved that human knowledge *is* valid. Now Kant tries to show what the special *a priori* forms of knowledge are and in what the validity of such forms consists. In the first book of the *Critique of Pure Reason*, the *Æsthetic*, he undertakes to show what the *a priori* forms of mathematics are and how they make knowledge valid by being forms of mental synthesis. In the next part of the

Critique, the *Analytic*, he tries to show what the *a priori* forms of the knowledge of physical science are and how they make physical science valid and objective. In the last part, the *Dialectic*, he discusses the *a priori* forms of the reason and shows why they have no validity in knowledge. These are three stages in which the knowing activity develops as three different forms of synthesis. The stages are perception, understanding, and reason. Each higher stage has the lower as its content. Finished knowledge involves perceptions, reproductions in the understanding, and a recognition of the whole by a thinking subject. Perception, understanding, and reason are not separate acts, but different levels of one consciousness. These will be taken up in succession.

1. **In What does the Validity of Sense-Perception Consist?** Kant points out:

(1) Sense-perception has (*a*) a content of sense qualities, like sound, color, etc., and (*b*) the relations of space and time.

(2) Space and time originally belong to the subject as its forms of sense-perception, and are not introduced from without by experience.

(3) By means of space and time *a priori* knowledge is possible.

If there is any validity in perceptual knowledge, it depends upon the constitution of space and time; not upon the character of the empirical content, or the sensations. The question about the validity of sense-perception, then, is a question about the reliability of mathematics.

There are two elements in sense-perception: a necessary and constant, and a changing and accidental. Space and time are the constant element. They are homogene-

ous, and always one and the same in quality. They are unities, for there is only one space and one time, and the many spaces and times are only divisions of this oneness. All the differences in space and time are due to the relation and movements of bodies, and are not inherent in space and time themselves. How is this unity and homogeneity of space and time to be explained? By assuming that space and time are original and uniform functions of perception, the forms of perception, the ways of apprehension, the "prehensile organs of our sensibility." They are the ways in which we synthesize on the lower level of consciousness. If they were given in experience, there is no reason why the several spaces and times should not be intrinsically different, like different bodies with different qualities. However, by conceiving them to be mental syntheses in the level of perception, they explain the universality of the laws of mathematics. They are the colored spectacles that all human beings wear; or, to use another figure, they are the mould into which all sensations are run. Being the unchangeable forms of our sensuous receptivity, they have a validity for the entire compass of perception. They are universal because one experience of space and time is valid for all spaces and times; they are necessary because we cannot think of objects apart from them; they are perceptual syntheses because they increase knowledge. Of course we are unconscious of this perceptual synthesis of the sensory elements in space and time. The process takes place automatically. We can nevertheless analyze the process after it has taken place, and speak of the sensations as the materials of knowledge, and the forms of space and time as the *a priori* elements. But in actual

conscious experience, sensations never come to us in their rawness. They are never turned over to the understanding unless they bear the stamp of space and time. The process of knowledge, therefore, starts with complex material — complex because it has been synthesized below consciousness. In other words, perceptions come into the process of knowledge with two aspects: (1) their permanent and necessary form; and (2) their accidental and changing content.

2. In What does the Validity of the Understanding Consist? Kant's discussion of the synthesis of the understanding is given in the *Analytic*, the second part of his *Critique*. His treatment of the understanding is similar to that of perception. The understanding, be it remembered, is regarded by Kant as the second stage in the process of a complete synthesis of knowledge. It is synthesis on a higher level than perception. Indeed, perception is the material which the understanding synthesizes. As in the *Æsthetic* Kant seeks to show: (1) the *a priori* factors of the understanding and (2) that these *a priori* factors give to knowledge its validity. The unifying principle of perception is the mathematical; but physical nature, which is the subject-matter of the study of the understanding, is more than mathematical, more than an aggregate of space and time forms, more than shapes and motions. Nature exists as a connected system of substances, causes, etc. Natural science possesses besides its mathematical basis a number of general *a priori* principles for the validity of its conclusions.

Kant's task was therefore only begun by showing that perception possesses the universal and synthetic principles of space and time. Perception is only the

beginning of knowledge. It is not knowledge, but only subjective consciousness. On the other hand, the understanding is the faculty of knowledge, and therefore Kant seeks to point out its *a priori* or universal elements, and by their presence prove its validity.

Since the days of Aristotle the general terms used in reasoning have been called categories. Any class-term or genus may be called a category. There are certain *summa genera*, the most extensive classes or classes with the lowest connotation, that have been traditionally known as categories, because everything that can be affirmed in a judgment must come under some one or other of them. Aristotle names ten, — substance, quality, quantity, etc. But these Aristotelian categories are classes of analytical relations, such as formal logic treats. They are the classes of the attributes and relations into which objects may be analyzed. These evidently are not what Kant is seeking. He is in search of synthetic categories. He is looking for the synthetic forms of the understanding itself, which transform perceptions into objects of knowledge. He is not looking merely for abstract conceptions. For ideas become nature objects only when they are thought as things with qualities universal to every human mind. The understanding creates out of the perceptions the objects of thought which form the nature-world; and the categories of the understanding are the constitutive principles of such objects. The categories are the relating forms of synthesis through which objects arise. The most difficult part of the *Critique* is called the "Deduction of the Categories," in which Kant attempts to derive the synthetic forms of the understanding from the various kinds of judgment. Kant's list is curious

but unimportant, and only two of these categories are useful, — substance and cause. He divides the categories into four general kinds and enumerates three categories of each of these kinds, as follows: —

Categories of Quantity, — Unity, Plurality, Totality.

Categories of Quality, — Reality, Negation, Limitation.

Categories of Relation, — Substance, Cause, Reciprocity.

Categories of Modality, — Possibility, Existence, Necessity.

These categories occupy the same position in the understanding that space and time do in the perception, — they are the *a priori* principles. In respect to them the perceptions are the *a posteriori* material. The categories are pure, innate, and transcendental. They are the inner nature of the understanding. Thus the objects of the understanding contain both *a priori* and *a posteriori* factors, and are syntheses of manifolds. Perception synthesizes sensations, while the understanding synthesizes perceptions, and states the synthesis in the form of a judgment.

Having named the *a priori* forms of the understanding, how does Kant show that by their means our knowledge of nature has validity? Because when the understanding functions, it prescribes these forms to perception. Impressions would remain vague and formless, if we did not think them; by means of thought we weld impressions into objects and give them a coherent reality. This is exactly what is meant by understanding. If nature were an independent thing and prescribed laws to the understanding, the laws would never be universal and necessary. The universality of

the laws of nature can be explained only by supposing that the understanding prescribes its laws to nature, not to nature as a Thing-in-Itself, but only so far as it appears in sense-perception. Universal and necessary knowledge of nature is possible only if the connections and relations of nature are absolutely identical with the modes of thought. The categories of the understanding have objective validity, therefore, because the laws of the understanding are the fundamental laws of nature. The understanding has given such laws to nature. *A priori* and therefore universal and necessary, synthetic and therefore creative, the world consists of objects under laws of the understanding. There are as many kinds of natural objects as there are categories of the understanding.

If we will examine what we call the world of nature, we shall find that many of its objects have never been perceived. Man has only partly explored the earth, and there are vast regions in space that he has never seen. He has never seen the South Pole, and the North Pole only recently; he has never seen the other side of the moon, and there are myriads of stars beyond even the reach of his telescope. These are not perceptible things, and yet they are the objects of the understanding — objects of knowledge. How is it possible? It would not be possible if the laws of nature were limited to the empirically perceived facts. It is possible because the laws of the understanding are the laws of nature and apply everywhere, whether the thing is actually perceived or not. The moon must have another side because the human understanding conceives all substances in this way; the law of cause and effect obtains beyond the stars, and at the South Pole, even though they have never been

perceived. The world of physical objects, or in other words the world of objects of the understanding, consists of both possible and actually perceived objects. If the laws of nature were prescribed by nature to the mind, then the world of objects would consist only of actually perceived objects.

But look at the world of nature a little more closely. It is one whole world with very many things in it. Why is this the case? Would it ever be so if our knowledge of the world was simply a reproduction of what the world presented to us? Of course not. There would be as many different worlds as there are human beings. The wholeness, the oneness of our world of many things to many individuals indicates not only that the understanding is the source of the laws of the world, but also that the faculties of understanding in all the millions of human beings have a transcendental unity. Knowledge has therefore a stronger proof of its validity, since what is knowledge for one human being is knowledge for all. Every individual man is conscious of the contrast between his own subjective world and the world of knowledge which he shares with other men. His own ideas have a movement of their own and have no validity beyond themselves; the ideas which he shares with others, however, are valid for all others because these ideas are beyond the control of any one man. Each individual man has to acknowledge this control of his knowledge as residing in something beyond himself. The categories of each man's understanding coöperate exactly with those of every other man. The individual man is not actually conscious of this process of coöperation in experience, but he accepts the objective necessity of it. The individual consciousness is not therefore the

creator of the objects of knowledge; rather consciousness in general — the consciousness of humanity — is the creator. Kant is not a solipsist, but an idealist. A higher consciousness, a super-conscious Self, must be assumed to explain the compactness of human knowledge. Kant does not call this super-conscious Self the "soul" or "spirit," but the "I think" or the "transcendental ego," or by the more clumsy phrase "the transcendental unity of apperception." He contrasts it with what he calls the "empirical ego" on the ground that it is the ego always identical with itself, rather than the Self at this or that particular moment. It is the Self as thinker rather than the Self as thought about. The super-conscious Self is always self-active and never dependent upon empirical conditions. It must be accepted as the postulate of all knowledge. It is the universal Self, and through it the categories of the human understanding become universalized. Just as space and time are the unifying forms of synthetic consciousness on its lower level; just as the categories of the understanding are the unifying forms of the synthetic consciousness on a higher level; so the universal Self must be postulated to explain the universality of the categories. It is a postulate only because it, not known in experience, is necessary to explain the unity of knowledge. This theoretical conception of the Self by Kant is thus very different from the traditional notion of the soul.

Has the Reason by Itself any Validity? When Kant calls his criticism the *Critique of Pure Reason*, he uses the term "Reason" in a wide sense as the whole knowing process. In the *Dialectic* he treats the Reason in a narrow sense, as if it were a special faculty like the perception or understanding. This is, of course, a con-

fusing use of terms, like his use of the term "Synthesis"; but it should cause no difficulty provided the two uses are known beforehand. The term "Ideas" is also used in two senses. In this place it has a special use. While usually an idea means any thought, here it means the synthetic form of the special faculty of the reason, just as the categories are the form of the understanding, and space and time the form of sense-perception. The synthetic forms of the Reason are the three Ideas, viz God, the soul, and the totality of the universe.

What is the office of this special faculty of the Reason and its Idea-forms? They represent Kant's way of stating the natural tendency of the human mind to get from its knowledge the greatest possible unity with the greatest possible extension. Consciousness is a synthesis which is never satisfied in being partial and incomplete. The partial syntheses of its faculties of perception and understanding do not satisfy it. Perception and understanding tell us nothing about God, about the soul, and about the totality of the universe, for these faculties are fettered to experience. Yet God, the soul, and the totality of the universe are very important matters. So the Reason leaps over the boundaries of experience, and thinks it is justified in poaching in the territory forbidden to knowledge. The Reason is not content with the partial and relational knowledge of mathematics and of physical science, but it would deal with the unrelated and the unconditioned. Indeed, we need only search our own minds to see how true Kant is to fact. We find that we ourselves are not satisfied with conditioned things, which must be explained by other conditioned things. On the contrary, we long to know the absolutely unconditioned, which alone will explain all conditions.

We are forever seeking to make our synthesis complete, and to render a rational and complete account of what is nevertheless impossible to our knowledge.

Now it is evident that the Ideas of the Reason are not indispensable to knowledge in the sense that the categories of the understanding and the forms of sense perception are indispensable. Cause, time, and space enter into all knowledge. Physical and mathematical laws exist as facts, and need no proof for their existence. Kant asked about them, "How are synthetic *a priori* judgments possible?" But concerning the judgments of the Reason, he asks a different question: not *How* are they possible, but *Are* they possible?

The Reason and its three Ideas give what Kant calls transcendent knowledge in distinction from the transcendental knowledge of the understanding and its categories. By transcendent knowledge he means that which is beyond the limits of possible experience; while transcendental knowledge refers to knowledge about the necessary principles of experience. Kant, however, is willing to acknowledge that the Ideas of the Reason have a legitimate use. They are "regulative principles" in that, by showing what our limitations are, they also show that human knowledge is not the final goal. Their illegitimate use appears when they make a show of being true knowledge. Both science and theology will be the gainers when the Ideas are no longer used illegitimately. Kant says that he has destroyed knowledge of God and the soul "in order to make room for faith."

The Idea of the Soul. Rational psychology had taught that the soul had direct and intuitive knowledge of itself. From the time when Descartes formulated his famous "*Cogito ergo sum*," this conception of self-

consciousness has been popular. I can have myself as the direct object of my own thought. Upon the basis of such assumed intuitive knowledge that each soul has of itself, the Rationalists had ascribed the qualities of simplicity, substantiality, spirituality, and immortality to the soul.

Kant denies that we have any such self-knowledge. If we turn back to his definition of knowledge we find it to be a synthesis of a manifold. Knowledge, to be knowledge, must (1) be based upon sensations, and on that account (2) consist only of phenomena. The soul is not phenomenal, but the deepest kind of reality. How can I have knowledge of my soul? The soul is spiritual and not phenomenal, even according to the Rationalistic philosophy. Therefore the soul is precluded from being an object of knowledge. Furthermore the Rationalists' conception of the soul as simple and immortal would make it an impossible object of knowledge. An object of knowledge is not simple, but is the unity of a manifold. The unifying or synthesizing function is not an object to itself. Sensations are synthesized by space and time into perceptions; but space and time are not objects for the sensations. In understanding, therefore, the "I think," which synthesizes the perceptions into judgment, cannot be an object for the understanding.

Kant points out that we must be careful to distinguish between the transcendental and the empirical ego. We have referred to this distinction already. In Kant's criticism of knowledge he maintained that there must be postulated a "synthetic unity of apperception," if knowledge is possible. But such an ego is only a postulate; we can have no knowledge of it nor can we say

what it is. We know that the immediacy of experience or the sameness of knowledge from moment to moment demands this. This is the transcendental ego, a kind of universal synthetic background.

But this is different from the empirical ego, which I can know as an object of experience. The empirical ego is what I can know of myself at any time — a group of sensations, feelings, or thoughts. Now such groups change from moment to moment. My knowledge of myself consists only of my momentary, changing self. This changing self is not the immortal, simple, and identical soul of which the Rationalists have been speaking. The empirical self is complex and transitory; it is an object of knowledge, and it is not therefore the same as the immortal soul. "I think I" is impossible. "I think me" is possible. To make the "I" an object is to commit a fallacy.

The Idea of the Universe. The contradiction in reasoning about matters beyond the test of experience appears sharply with reference to problems about the world as a totality. The inherent self-contradiction of the reason attracted Kant's attention very early with reference to the problems of infinity. Such self-contradictions were put into final shape by Kant in the *Critique* in the four following so-called antinomies: —

(1) The antinomy of creation. Thesis: The world must have a beginning in time and be inclosed in finite space. Antithesis: The world is eternal and infinite.

(2) The antinomy of immortality (or the simple). Thesis: The world is ultimately divisible into simple parts which cannot be further divided. Antithesis: The world is composed of parts subject to further division, and no simple thing exists in the world.

(3) The antinomy of freedom. Thesis: There is freedom; there are phenomena that cannot be accounted for by necessity. Antithesis: There is no freedom, but everything takes place entirely according to the necessary laws of nature.

(4) The antinomy of theology. Thesis: There is a necessary being either as part or as cause of the world. Antithesis: There exists neither within nor without the world an absolutely necessary being.

Critics have pointed out that these problems as thus stated by Kant are not altogether cosmological problems, but include the contradictions of psychology and theology; that is, all the contradictions of the Reason when it is used dialectically. They show how both Rationalism and Empiricism, as metaphysical theories, are in their nature contradictory. When the universe is treated as an object of knowledge, contradictory propositions can be maintained. The contradictories are both proved and refuted. In respect to the first two antinomies, both theses and antitheses are false; in respect to the last two, both theses and antitheses may be true, if they refer to different worlds. If the Ideas are applied only to the world of phenomena, they involve inexplicable contradiction. The Idea of free will and unconditioned being may apply to the world of Noumena; while the Idea of necessity and conditioned being may apply to the world of phenomena.

The Idea of God. The Idea of the soul involves us in a paralogism, the Idea of the universe as a whole involves us in inextricable difficulties and contradictions; the Idea of God cannot be demonstrated. Kant does not deny that God exists. He merely maintains that we cannot make God an object of knowledge. The

Idea of God is to Kant the expression of the need of the Reason for a perfect unity.

In one of his earlier writings Kant had constructed a conception of God, which is the same as appears in the *Critique*. God, purely as a conception, is constructed by Kant as the sum total of reality, the *ens realissimum*, who so includes all finite qualities in Himself that they do not limit Him. He is the primal cause of the possibility of all being. Now, can such an Idea have objective validity? No; the Idea of a sum total of all that is conceivable is not an object of possible experience. Only particular things or phenomena are realities for us. God as the transcending total of particular things can have only a conceptual reality and a validity for thought. The total has the reality that any idea has. This is Kant's general criticism of the dialectic Idea of God.

But the general conception of God had played so important a part in traditional philosophy that Kant felt it necessary to examine the three important intellectual proofs for His existence in order to show their falsity.

He takes up first *the ontological proof* of God's existence, which originated with St. Anselm and had been accepted by the Rationalists. The Idea of God is the idea of a perfect being. A being would not be perfect who did not exist. Therefore the Idea of a perfect being must include the quality "existence" among its predicates. The essence of God must involve His existence, because the unreality of the *ens realissimum* cannot be thought. Kant replies thus: "Being is no real predicate." It is not a quality like love, power, or goodness, for it adds nothing to the content of the

subject. "A hundred dollars contains no more content than a hundred possible or conceptual dollars." We cannot reason from the concept of the actual to its existence. The only test of actuality is perception.

The cosmological proof, which Kant examines next, is an argument from the existence of contingent phenomena to the existence of an unconditioned reality. There must be some uncaused cause of existing caused phenomena. Kant's reply is this: Cause has no meaning if it is applied beyond the bounds of experience. Within experience all causes are the results of causes, and therefore an uncaused cause is a contradiction in terms. Every existing thing is contingent. A necessary being can be only a thought, and would not be powerful. It would not be as powerful as a very great finite thing which had existence.

The physico-teleological argument comes next under Kant's criticism. This argument is based upon the inference that intelligent design found in nature implies an intelligent designer of nature. Kant replies as follows: Even granting that the world exhibits the design of beauty, goodness, and purpose in its construction, such a beautiful, good, and purposeful world would only prove the existence of an architect and not the existence of a creator. Kant points out, however, that this proof is the oldest, clearest, and the most popular; and he thinks it deserves to be treated with respect on that account. The wonder and magnificence of nature must free man from the oppression of any subtle argument against the significance of nature. Nevertheless Kant feels that this proof lacks intellectual cogency; for it is possible that nature is freely acting and has power within itself.

The conclusion of the *Dialectic*, in which the Reason

attempts through its Ideas to soar beyond experience is that such speculation has never added to our knowledge. Mere conceptual thought cannot be knowledge of the reality of the soul, God, and the world. Still, the Ideas of the reason are an integral part of the human mind, and they must have their purpose. They cannot be verified by experience, in which alone is truth, but they can regulate experience. They are "regulative Ideas" in that our experience is better governed if we act as if there were a soul, as if God existed, and as if the world were a totality of related things. Moreover, while speculation cannot prove the existence of God, the immortality of the soul, and the freedom of the will, atheistic speculation is unable to prove the contrary of all these propositions. The Ideas of the Reason clear the way for faith based on morality.

Conclusion. The *Critique of Pure Reason* is what its name implies, — a criticism of our conscious powers. It points out the limits and extent of human knowledge. In one sense, it is constructive; for it establishes against skepticism the conclusion that knowledge has a validity within its own limits. In another sense, it is destructive; for it shows against dogmatism how futile our intellectual striving is to explore many regions that have been considered the proper realm of knowledge. No knowledge is possible that is transcendent — no knowledge beyond the limits of experience. Experience ties our mental powers to itself. Experience is the boundary of the understanding. Reality, the Things-in-Themselves, are unknown and unknowable. But transcendental knowledge is possible. Within experience there are the transcendental factors that on the one hand transform sensations into phenomena, and on the

other give to these phenomena a validity for all mankind. These transcendental factors make knowledge reliable, but they add not one whit to its content. On account of these transcendental factors we can be rational with one another and members of one world of humanity. The value of knowledge is not lessened, but is defined. Our world of phenomenal existence is now accurately assessed as a world of relative reality. It is placed in its proper perspective. It is seen as our own *interpretation* of what is really real. This is very important; for although the restricted form of our mental powers withholds us from knowing reality, we may nevertheless think it. The pure intellection of reality will be of value, if in some other way its contents can be assured. Kant now points out that this assurance is found in the moral will.

The Problem of the Critique of Practical Reason: The Ethics of Kant. "Two things fill the mind with ever new and increasing admiration and awe, the oftener and the longer we reflect upon them: the starry heavens above and the moral law within." In this classic sentence Kant showed that he had no desire to humiliate the theoretical reason, which is the understanding. He was merely assigning it to its place among the powers of man, in order that it might do its proper work more efficiently. The world of morality and the starry heaven impressed Kant equally. Kant would not have the understanding chasing will-o'-the-wisps. After his criticism of the understanding he turned to the will, or as he calls it the practical reason, and criticized its functions and scope. This ethical teaching of Kant appears in his *Metaphysic of Morality* and in the *Critique of Practical Reason.* His early Pietistic education, his reading

of Rousseau, his study of the English moralists, influenced his theory of morals; while his investigations into the history of civilization, his theoretical philosophy, and his independent analysis of the ethical feeling marked the route which his ethical development took. The world of morality to Kant has primacy. In his theory it is the real world, for compared to it the world of scientific phenomena, the world of the theoretical reason, is relative.

The central idea in Kant's theory of morals is that rational spontaneity is exactly the same as freedom. This contrasts his theory with Hedonism. The value of man's life depends on what he does spontaneously, not on what happens to him. This idea of freedom is the central thought in all Kant's discussions of society. In his theory of government the republic is to be preferred to the monarchy, because of the opportunity to its citizens of spontaneous freedom; in religion the true church is composed of free beings worshiping God freely; in education self-activity is the sole principle of growth. Ethics is a system of the pure rational laws of freedom, just as science is a system of the pure rational laws of nature. If ethics has real validity its laws must be, as in science, *a priori* or derived from the reason itself, and synthetic or applicable to experience everywhere. If the moral law be valid it must be indifferent as to its content, and yet valid for all content irrespectively. The source of the principle of morals is thus the same as that of science: it is *a priori*. The principle of morals is universal in its application to experience, just as the *a priori* synthesis of knowledge is. However, just at that point the difference is to be seen between the foundation of science and that of morals — between the reason as

pure and the reason as practical. Reason in the form of knowledge is restricted to experience; but reason in the form of the will, while applicable to experience, is not restricted to experience. If the understanding is without the content of experience, it is empty and useless. The understanding must always be a synthesis of a manifold. On the other hand, the practical reason needs no content. It is sufficient in itself. It need not be obeyed anywhere nor have any concrete content in the phenomenal world. It has no reference to what *is* but to what *ought to be*. The world of morality and the world of phenomena are different worlds. The world of morality is absolute reality, while the world of knowledge is only relative. The world of morality is the unconditioned, while that of knowledge is conditioned by experience. Morality applies not only to human beings, but to all rational beings, if any other rational beings exist. Knowledge, however, belongs to human beings alone. The moral law has not its home in the empirical, but in the transcendent, intelligible world, which to knowledge would be the world of Things-in-Themselves.

The Moral Law and the Two Questions concerning It. The questions of the *Critique of Practical Reason* are the same as those of the *Dialectic:* (1) Is there any *a priori* synthesis? This is not the question of the *Analytic*, which is, How is an *a priori* synthesis possible? (2) Can the human being be moral and still be a part of the world of phenomena and necessity? We shall now comment on the first of these problems. If the will has validity, it must be the expression of some universal and necessary principle. Can we find any such *a priori* principle in our consciousness?

1. *The First Question concerning the Moral Law.* If we search our consciousness, we shall find that there are two classes of incentives to action. The first are called the inclinations, or perhaps better the impulses. We may will because we desire to gain something, of use, pleasure, perfection, etc. Such an act of will is dependent upon the object that arouses it. Such an act of will would not be an example for any one else; for the circumstances that called it forth would be likely to be different in each case. For example, there is no consensus as to pleasure among individual men; and what is pleasant to one is unpleasant to another. The same is true about objects of use and ambition. In all these matters judgment does not help us in making our selection, for people who are the most discriminating often are the most unhappy and useless. All these things are indeed goods, but they are goods for the moment — goods that are dependent on something else, and not goods in themselves. They are legitimate ends enough, but they are so transitory that they cannot be valid. It is evident that when the will is governed by inclination, it is governed by an empirical (*a posteriori*), and not by a universal and necessary (*a priori*) principle. Such empirical principles are called by Kant hypothetical imperatives.

Let us look to the reason itself to see if the principle of its practice lies there; for it is certain that we shall not find the principle of universal validity for our will among our impulses. The reason is a spontaneous synthesis. It is a fact that any one may verify who will search his consciousness — that man may will from reason. The will may be impelled from within, and need not be compelled from without. The will may be

an imperative in itself, proclaiming its right because it is reasonable, justifying itself because it is reasonable, functioning because it is the function of reason. Then is the will the expression of reason. It is the reason in practice. The will is unconditioned and free because it is the unconditioned reason acting. It is then autonomous. It has then validity because the reason is universal and necessary. This kind of willing Kant calls the categorical imperative. It is the moral law. It is a law unto itself, and it is the only basis for morality because it is the universally valid reason.

The categorical imperative is unique — there is nothing like it in human nature. It is the one kind of willing that has absolute validity; and that is because it is unique in having itself for its own end. The conscience may be said to be its expression in the individual. Kant formulates the valid command of the moral law as, "Act as if the maxim from which you act were to become through your will a universal law of nature." The various maxims of morality, like "Thou shalt not lie," occupy the same position to the will that the categories do to the understanding. They are the forms of the moral will. Actions should proceed from maxims rather than from impulses, and the moral maxims are adapted for all beings who act rationally. A specific act may become good because the moral law, that inspires it, is good. Nevertheless "nothing can possibly be conceived in the world or even out of it, which can be called good without qualification, except a good will." The virtues or the gifts of fortune may be good and desirable; they may also be evil and mischievous, if they are not the expression of the moral will.

2. *The Second Question concerning the Moral*

Law. This leads us to the answer to the second question, How can such a purely necessary and universal principle be effective in human life? Of what service to man is a principle so formal that if the inclinations coöperate with it, the act is no longer moral? The moral law is not only transcendental, but it is transcendent, for it does not have experience as its content. It is its own content. It is independent of all experience in three ways: (1) In origin, it contains only a formal principle; (2) In content, it contains only a formal principle; (3) In validity, it is not concerned as to whether it is obeyed or not; it declares what ought to be, even if what ought to be is never done. The question always arises about Kant's ethics, Of what service can such a remote and formal principle be? Morality takes place in the world of experience; and here is Kant's principle of morality existing in the world of unconditioned reality. Of the usefulness of such a principle Kant's explanation is not fully satisfactory. His ethics is fundamentally a rigorism, from which he is unable to escape. Duty and inclination are in antagonism. Only those acts of will are moral which are performed solely from the sense of duty. In themselves the natural inclinations are indifferent; when they oppose the moral will, they become bad; only when they are inspired by the moral will are they of ethical service. Moral action is therefore narrowed to that in which the imperative of duty is consciously paramount.

"The friends whom I love, I gladly would serve, but to this inclination incites me;
And so I am forced from virtue to swerve, since my act through affection delights me.
The friends, whom thou lovest, thou must first seek to scorn, for to no other way can I guide thee;

'T is alone with disgust thou canst rightly perform the acts to which duty would lead thee."[1]

The Moral Postulates. Kant's ethical theory points away from the phenomenal world rather than toward it. To be sure, the natural inclinations take the color of the moral law when they are inspired by it; but the moral law tells us of the world of reality rather than of the world of phenomena. The moral law shows to man that he is more a resident of the world of reality than of that of phenomena. Man's nature is dual. Of its two sides — the theoretical and the moral — the moral is primary. Fundamentally man is a willing agent rather than a thinking being. He is a phenomenal being, bound to the laws of natural necessity; but he is also a real unconditioned being, because the unconditioned reason is his real self. What was implicated in the *Critique of Pure Reason* becomes explicit in the *Critique of Practical Reason*. The understanding hints at what the will makes plain. Human knowledge is a mixture of transcendental understanding and empirical sensations. God's knowledge would be pure understanding; the knowledge of the brutes is pure sensations. Human morality, however, contains a dualism; for the practical morality of man consists of the formal moral law inspiring the sensibilities although not heeding them. The will as pure reason is the activity of God; the will as pure impulses is the activity of brutes. But the true realm of man is this world of reason in which he is one with God, although he is at the same time hampered by being part of the world of phenomena.

[1] Quoted from Falckenberg, *Hist. of Modern Phil.*, p. 387. This is a paraphrase of some of Schiller's verses in *The Philosophers*, a satirical poem of philosophical theories.

1. **The Postulate of Freedom.** The unconditioned moral law is the basis of freedom for which all scientific knowledge seeks in vain. An unconditioned will is a free will. The will based upon the reason is based upon itself and is therefore free. The consciousness of the moral law within us implies freedom in its exercise. The "I ought" implies "I can." We can have no knowledge of freedom, for in the eye of the understanding only causal necessity rules. But the reason commands as well as knows. It states what ought to be as well as what is. Its mandate implies freedom, as its knowledge states existence. When we will, we act as if we were free, and our freedom is a postulate which cannot be proved to the understanding. Freedom is not an object of knowledge, but an act of faith. Freedom as a postulate is the condition of morality, and the primacy of the will over the pure reason is shown in the fact that it can guarantee what the understanding cannot prove.

2. **The Postulate of the Immortality of the Soul.** The goal of the inclinations is happiness. The goal of the will is virtue. There is no relation or correspondence between the two in this world. A man may be happy and still not virtuous; he may be virtuous and not happy. Since a man belongs to both the world of free spirits and the world of necessity, he is thwarted in reaching for his highest good in this life. His highest good is the union of virtue and happiness. If this is to be attained, another life must be guaranteed. Yet this is only a postulate and not a proof. When man wills, he wills as if he were an immortal being.

3. **The Postulate of the Existence of God.** Faith in reaching forward must postulate God, as alone able to vouchsafe future harmony between goodness and

happiness and alone able to distribute justly the rewards and punishments that are so disproportionate in this world. When I will, I will *as if* God existed. When I will, I create by my willing my freedom, my immortality, and God's existence. But because my will is an unconditioned law of my real being, my faith in these things is well founded.[1]

[1] Kant's theory of Beauty, discussed in his *Critique of Judgment*, through which he tries to reconcile the antagonism of knowledge and morality, is omitted here.

CHAPTER XI

THE GERMAN IDEALISTS

Idealism after Kant.* Kant's criticism had been a fine dissection of the processes of knowledge. He had laid scientific knowledge open and separated it into its parts. In doing this he had acted in the spirit of his time, which had been inaugurated by Lessing. His doctrine became the point of departure of many differing systems. A modern German professor in the University of Berlin has been wont to say, "There are ten interpretations of Kant's *Critique*, which are the ten kinds of philosophy at the present time." The incoherence of Kant's philosophy made it famous. He represented the first stage of a social movement; and like all social movements the world over, the first stage was critical, self-inconsistent, and destructive of tradition. The second stage is the one upon which we now enter, and we shall find it to be reconstructive along several lines. Criticism is always an inducement to new systematization. In Germany, after Kant, there was naturally, therefore, a great systematic movement which its intellectually virile and many-sided life was ready to express. Culture and philosophy went hand in hand. Jena was the centre of Kantianism and was in close proximity to Weimar, the centre of German culture.

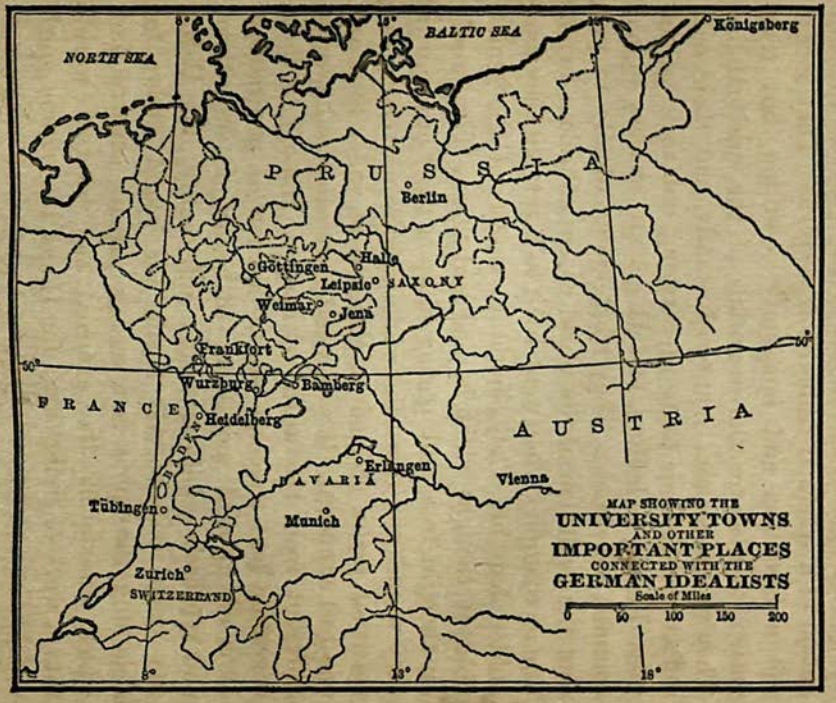
At the time that the philosophy of Kant became popular, the teaching of Spinoza was resurrected from its long sleep and introduced into Germany. Kant was

* Read Windelband, *Hist. of Phil.*, pp. 568–569.

the "all-crushing" critic; Spinoza was the dogmatic mystic. Their opposition did not amount to a contradiction, but was of the correlative sort. Kant and Spinoza became the two intellectual foci about which revolved the thought of the generation after Kant. All the succeeding philosophers show Kant's influence upon them, for they all accept his epistemology. They show the influence of Spinoza in varying degrees.

The philosophers whom we shall now meet may be divided into groups. The first group consists of Rheinhold, Fichte, Schelling, and Hegel. These took the lead in destroying the Kantian conception of the thing-in-itself and in constructing a pure idealism. The second group consists of Herbart and Schopenhauer. These tried in different ways to develop a metaphysics of the thing-in-itself. A third group consisted of the old Wolffian rationalistic school, which was, however, unsuccessful in its opposition to the spread of the doctrines of Kant and Spinoza. A summary of the leaders of the German thought of this time would not be complete without mention, lastly, of the miscellaneous group of literary Romanticists, whose writings partook of the philosophical spirit. The influence of Spinoza is especially prominent in this group. Jean Paul Richter (1763–1825) was the forerunner of this movement, and it included the names of Tieck, Wackenroder, the two Schlegels, Novalis, the two Romantic women, — Dorothea and Caroline, — Schiller, and Goethe. The poet Schiller did much to popularize Kant's æsthetic and moral doctrines.

Fichte, Schelling, and Hegel. This group of disciples of Kant can be understood sympathetically only in the light of their age. They were not philosophical adven-


NORTH SEA
BALTIC SEA
Königsberg
PRUSSIA
Berlin
Halle
Göttingen
Leipsic
SAXONY
Weimar
Jena
Frankfort
50°
50°
Würzburg
Bamberg
FRANCE
Heidelberg
AUSTRIA
Erlangen
Vienna
BAVARIA
Tübingen
Munich
Zurich
SWITZERLAND
8°
13°
18°
MAP SHOWING THE
UNIVERSITY TOWNS
AND OTHER
IMPORTANT PLACES
CONNECTED WITH THE
GERMAN IDEALISTS
Scale of Miles
0 50 100 150 200

turers, otherwise the great representative of the age, Goethe, would not have associated with Schelling and Hegel on equal terms. They stood for the revulsion of the period against all external systems, and for the realization of a spiritual realm of free spirits. They sought not a factitious and imaginary condition, but tried rather to discover the essentials of the spiritual life. They would reclaim reality spiritually, and their only defect was in their haste in carrying out their principles. Fichte, Schelling, and Hegel are sharers in one common movement. They tried systematically to present the evolution of the world as an unbroken evolution of thought. They went back to Kant, but they were bolder than he. They sought to transcend the limitations of thought which he had laid down. They would set thought free, and, gazing in upon their own spirits, they would find there the whole infinite universe. The spiritual realm seemed to them to be wider than any one had supposed. It was a self-governing realm, quite different from the world of matter. History to them is cosmic and develops under one law of progression. It is an upward movement of assertions, negations, and syntheses. Life is cosmic spirituality. For Fichte the spirit is a cosmic battle for moral ends; for Schelling the spirit is a cosmic artistic construction, which transforms the external and internal worlds into a work of living art; for Hegel the cosmic spirit unfolds in a strict and rigorous logic, whose consummation is thought of thought. But while Fichte, Schelling, and Hegel look at the world each in his own way, they are members of one common movement toward spiritual freedom, and toward the reëstablishment of metaphysics.

The Life and Writings of Fichte (1762–1814).* Johann Gottlieb Fichte was the most notable of the immediate disciples of Kant. In contrast with the undisturbed and uneventful scholastic retirement of his master, Fichte's life looms up as a series of conflicts, sometimes with extreme poverty and sometimes with hostile forces created by his own stubborn and irascible disposition. Fichte's external life was throughout one of curious contrasts, both of tragedy and romance. His love for the moral and theological appears in his early youth in his voluntary self-denial and in his sermons to the geese which he was herding. Again, he made preparation to become a preacher, but his intellectual training in the university drove him to abandon it. He became a necessitarian and tried to square his life with his philosophy, although it weighed his heart down. Then came the so-called "Atheistic Controversy" when he was professor at Jena, and his defiance of the authorities and his dismissal. In the tumultuous days at Berlin he turned his metaphysics into patriotic appeals, and would have joined the army, but his death intervened. The inner development of Fichte, too, was different from that of Kant. Kant's inner development was coincident with his long life. Fichte, on the other hand, at the age of twenty-eight had read and accepted Kant's philosophy, and four years later had created his own. This was only slightly modified in his later years in the direction of the pantheism of Spinoza. Kant's life was, apart from the political current of his time,

* Read Royce, *Spirit of Modern Phil.*, chap. v; Eucken, *Problem of Human Life*, pp. 486–490; Rand, *Modern Classical Philosophers*, pp. 486–496, 516–535; Windelband, *Hist. of Phil.*, pp. 579-581.

while his doctrine became fundamental for all future philosophy. Fichte's life and philosophy were more expressive of his time, but less lasting in their influence. Fichte is the philosophic preacher to his time; Kant is the instructor of all time.

Fichte's life may be divided into four periods, which are marked by certain external events.

1. *His Education* (1762–1790). He was the son of a poor ribbon-maker. As a boy he worked for his father, and again at the equally humble employment of herding geese. It was during this latter occupation that his wonderful memory attracted the attention of a philanthropic nobleman, who gave him means for an education. Fichte studied theology, philosophy, and philology at Leipsic and Jena; but he had to face extreme poverty again upon the death of his benefactor. In 1788 he got a position as tutor in Zurich, and here he met Pestalozzi, Lavater, and his future wife, a niece of the poet, Klopstock. During this period his philosophy was a necessitarianism, which he had evolved from the theology in which he was trained and his reading of certain books on Spinoza.

2. *Discipleship of Kant* (1790–1794). Fichte returned from Zurich to Leipsic, and in the capacity of tutor in philosophy he assisted a young man in the reading of Kant's *Critique*. He was at once converted heart and soul to the Kantian doctrine. In 1791 he called on Kant at Königsberg and submitted to Kant his *Critique of Revelation*. The next year he published this work, and by some fortunate accident his name as author was omitted from the title-page. The work was attributed to Kant, and was widely read as a masterpiece by Kant. Kant had to correct the mistake, which,

however, made the real author, Fichte, famous. So he returned to Zurich in 1793 to marry Fräulein Rahn, who was herself now in comfortable circumstances.

3. *His Life at Jena* (1794–1799). The year 1794 was another milestone in the biography of Fichte. In this year he was called to Jena, then the principal university of Germany, to succeed Rheinhold. In this year he published his philosophy in his best known work, the *Wissenschaftslehre*. He remained at Jena only five years. At first his popularity exceeded that of the popular Rheinhold, but he soon filled his life with controversies. He quarreled with the students and the clergy, and in 1799 the so-called "Atheistic Controversy" arose, in which charges were brought against his teaching as atheism. Brooking no criticism either of his teaching or of his official position, he defied the authorities of the university and was dismissed.

4. *His Life at Berlin* (1799–1814). In 1799 Fichte went to Berlin to live. At first he had no academic affiliations, but he found a large and sympathetic public, to whom he lectured. He was warmly received by the circle of Romanticists, — the Schlegels, Tieck, and Schleiermacher. His philosophical system got little development; but the influence of Spinoza appeared in his teaching. He lectured upon the ethical and religious aspects of his philosophy, and upon political and social subjects. In 1808 he delivered his famous *Addresses to the German People*. In 1810 the University of Berlin was founded and he was called to the chair of philosophy, but he was connected with the university only two years. For in 1812 came the call to arms, and Fichte was with difficulty dissuaded from enlisting. He remained in Berlin and preached to the soldiers in

camp. His wife volunteered as hospital nurse and contracted a fever, from which she recovered. Fichte, however, who nursed her through her sickness, died of the disease in 1814.

The Influences upon Fichte's Teaching. Any estimate of the influences upon Fichte would be distorted that did not recognize the calibre of the man himself. Fichte was essentially a puritan reformer. He was impetuous and life-loving, but withal a simple-minded man. All the philosophical influences which he was capable of feeling would naturally be turned by him into ethical and religious sermons to reach the life of men. He must be thought of as the crusader armed with abstract truths, which he wields with a giant's strength for the moral uplift of man.

It was natural then that the two principal influences upon Fichte's doctrine should be Spinoza and Kant. To be sure, such writers as Lessing, Rousseau, and Pestalozzi furnished him much material in his early years, and the Romanticists in his later years. His wife, Johanna Rahn, was also a source of power to him, and through her influence after their marriage his aim became clearer and his character lost much of its harshness. But the two great influences upon Fichte were the two great philosophical forces of this time, Spinoza and Kant. Fichte's philosophy has been described as "Spinoza in terms of Kant," and also as "an inverted or idealistic Spinozism." The influence of Spinoza upon Fichte's thought is seen at both ends of his life. At the beginning he was an amateurish Spinozist. He found that the theological training of his boyhood was a necessitarianism like Spinozism. He lost his faith in Christianity, and he was unhappy because he found Spinoza's

doctrine of necessity was intolerable and yet unanswerable. Then he read Kant and found a solution of his difficulty without having to change the doctrine of Spinoza. For Kant had placed behind the necessitated world the free spirit. In the last period of Fichte's life the influence of the mystical side of Spinozism appeared, through Fichte's intercourse with the Romanticists in Berlin.

Why We Philosophize. To Fichte philosophy was distinctly a personal problem, and we feel in all his words that he is wrestling with his own nature. He found in his mind two very different classes of ideas, and he was certain that philosophical problems arise from their antagonism. On the one hand there are the ideas about the world of physical nature, which are only our experiences under the law of necessity. On the other hand there are the ideas of the individual consciousness, which are contingent and voluntary. Which of these two classes of ideas is primal? Fichte felt that all philosophical curiosity arose from the contrast of these two classes; the solution of philosophy and the satisfaction of our philosophical curiosity would be reached only by the reduction of one class to the other. Fichte calls the philosopher a dogmatist who seeks to reduce voluntary ideas, which compose our individual consciousness, to the necessitated series. Spinoza sought to do this, and the philosophy of Spinoza depressed Fichte as intolerable. But there is the alternative to the philosopher to explain the necessitated series by voluntary consciousness. This is idealism. The moment a man begins to reflect, he must choose between dogmatism, *i. e.* necessitarianism, and idealism. He is always confronted by an Either-Or, a choice between freedom and necessity.

The Moral Awakening. In his early life Fichte saw to his despair no escape from the philosophy of necessity. When he read the *Critique of Pure Reason* a great light came to him. He flung himself immediately upon the side of idealism. He saw that necessitated events were phenomena, and therefore the creations of consciousness. Consciousness cannot be the slave of necessitated events. Kant's philosophy was to Fichte a work of art of the free spirit. The world cannot contain man and compel him. Man may be oppressed by the world, but he can see that such oppression is not real. In his *Vocation of Man* (1800) he gave in autobiographical terms the story of the awakening and development of the individual mind. At first one is overwhelmed by the sight of the necessitated events of the world. Next he comes to believe that all events are mere appearances, and he is weighed down by the still greater despair that no reality whatever exists. Finally he finds the rock of hope amid the sea of appearances. He finds an ultimate and irreducible fact in the categorical imperative of duty. "Thou must" is above necessity, above the phenomena that are always reducible to other phenomena. Duty means the freedom of my inner life. That there is always lodged in me a duty to perform, shows that I am superior to phenomena, that I am a citizen of the supersensuous world. This "heaven does not lie beyond the grave, but already encompasses us, and its light dawns in every human heart." "That I myself am a freely acting individual must be the fundamental thought of every true philosopher."

Every one must therefore choose between dogmatism and idealism, if he would not fall a victim to skeptical despair. Two motives will determine one's choice:

one theoretical, the other practical. The primary motive is the practical one, and since dogmatism and idealism are equally consistent systems, man's choice will depend mainly on the manner of man he is. If the individual has a high sense of duty, he will be disposed to believe in his moral control over all his experiences, however much they may seem to be necessitated. Conscious freedom will seem to him to be the only satisfactory explanation of practical life. But then there will be the additional theoretical motive. The man that chooses either dogmatism or idealism must theoretically make his world consistent. The dogmatist cannot explain the conscious facts in terms of determinism; but, Fichte thinks, the idealist can explain the necessitated facts in terms of consciousness. At any rate the idealist has the task of rethinking his scientific knowledge.

The Central Principle in Fichte's Philosophy. How does Fichte attempt to draw up a consistent theory so that he can overcome the dualism between the necessitated facts of physical nature and the free states of consciousness? As an idealist he must rethink the knowledge of science. But how is this to be done? What principle will he place at the central point of consciousness, so to illuminate the manifold problems of life that life's dualism will prove to be only apparent after all? Here as answer we find the outcome of Fichte's struggle with his own nature. He believed that the principle of the true philosophy of life comes from the study of consciousness. The nature of the Ego is the subject for philosophical study. What is the essence of the Ego or the personality? It is activity, will, vitality; not intellect and changelessness. But can we not get beneath the activity of the personality and ask, Why does it act?

Yes, *because it ought*. When we have said this we have said all. The essence of the vitality of the Ego is moral obligation. *Ought* is the foundation of life; it is ultimate ground of existence. If we ask why there is an ought, the only answer is, there ought to be. The duty exists that you and I shall have a duty. In order to be, the Ego must act; and it acts in response to duty. This activity is free activity. The Ego is unconditioned because it is acting out its own nature. Thus when Fichte is talking about the Ego, the ought, the moral law or freedom, he is talking about the same thing in different guises. Fichte placed moral freedom as the central principle of metaphysics and tried to rethink the world of necessitated experiences in terms of moral freedom. He attempted to construct a monistic view of life, of which the free moral personality should be its inner vitality. Monism and liberty was Fichte's war-cry. Reality is in us; there can be no reality independent of us. The morally free Ego is the central principle of life.

Such a message to the German people would appeal to two sides of their nature. It would appeal as a metaphysics to the mysticism in their blood; it would find also a practical response in the humanitarian and revolutionary spirit of that revolutionary time. Be up and be doing, for reality is not what people commonly think it is. Your environment is only apparently an independent existence beyond your control. Reality is not static. Rethink it and make it dynamic. Not being, but acting, and free acting, is reality. Such was Fichte's sermon to the Germans of his day. His theory can be stated in the terms of the Greek Heracleitus, "All things change," provided the change be thought of as moral activity. To philosophize was to Fichte to think the

universe as free moral activity, to see inactivity nowhere, to free ourselves from dualism and to participate in the universal freedom. Freedom is higher than truth. Existence is derived from thought in action, and thus our existence and our environment may be shaped by us. Thought is essentially action, and we shall educate the world only through our own activity.

The Moral World. Fichte had a philosophy, the principles of which he repeated over and over again as a kind of habit. He was a man of few but great ideas. He was inspired by some general conceptions which he did not carefully elaborate. His philosophy can be expressed in few words, and his point of view is not difficult to feel. Nevertheless, there is great difficulty in restating his meaning. He maintained that Kant's early philosophy was not truly Kantian, and that he, Fichte, represented the true Kant. In taking this stand he was obliged to do two things: to explain away the thing-in-itself, and to rethink the world of necessitated nature in terms of the activity of the morally free Ego.

If we start from the heart of existence — the active Ego — the world spreads out before us as a system of reason which has been created by the activity of the Ego. On this account Fichte's philosophy has been called subjective idealism. In such a scheme of things there is no place for the Kantian thing-in-itself. All Being is only an extended product of the active Ego and the object of its knowledge. The Ego acts because it must, and then reflects upon its activity. Its knowledge of its activity is in grades from sense-perception to complete knowledge. Now Kant had referred sensations to the thing-in-itself as their source. But this is unnecessary, since sensations are only the activity of the Ego. Sensations

are the groundless, free act of the Ego. They appear to be "given," because they appear to be foreign and coming from without. They are, however, only the lowest form of the activity of the personality — they are unconscious self-limitation of the Ego. The sensations have no ground that determines them, but as the lowest form of the activity of the Ego they are absolutely free. Thus the thing-in-itself becomes superfluous, since it is not necessary to account for sensations.

The next task for Fichte is to rethink the series of necessitated events of physical nature. If we will look at these events from the point of view of the willing Ego, which is reality, they will be seen to be products of purposive action. Together they will make a world of connected rational activities rather than a mechanical system. The necessity in nature is not causal, but teleological. It is not the necessity linking the series of events together, but rather the linking of each event to the acting Ego, and thus the connecting of the whole series. Take the idealist's position and this illuminating thought will come to you: a thing is not because something else is, but in order that something else may be. As moral beings we have tasks. As moral beings we are the impersonation of duty, and duty is reality. These phenomena that so trouble us because we think them necessitated are only contingent upon the performance of our duty. The existence of one thing is not to be explained by the existence of another, but by the existence of me, an Ego. Phenomena are little steps toward great ends. When I rethink the world I see no causal relationship, but the teleological means for the achievement of purposes by striving souls. History and nature — these are the material created by human beings for their own

activity. We not only create our human drama, but we create also the stage upon which it is performed. Being is not the cause of Doing, but Being is created for the sake of Doing. Whatever is, is to be explained by what ought to be. "The world is the theatre of moral action." "Nature is the sensible material of duty."

God and Man. If Fichte regarded the human personality from this moral height, he would naturally give a new meaning to God, the absolute reality. God is not a substance, a something that "is." God is the universal moral process, the moral world-order. God is the Universal Ego, a free, world-creating activity. God was conceived by Fichte as Matthew Arnold's "something not ourselves that makes for righteousness." When I find in myself that duty is reality and not this or that fixed and crystallized thing, when I find that my real self is moral functioning and not a tangible form of flesh and bones, then I take the next step. I then find that God is universal duty, universal moral functioning, in which I am participating. We are not only part of God — yea, we are He. As the Holy Writ says, "Ye are Gods." The absolute Ego manifests Itself in our poor finite Egos. How dignified our humble lot is made by thinking that in our acting, God is acting! We are fighting God's battle, and His victory is not won except as we win. Duty in us is the clarion voice of God, and we are persons so far as we express that voice. It matters little whether I speak of my own duty or the moral purpose of the world. They are the same thing.

This enjoined labor upon every rational soul to perform his duty of reaching high ideals, through his humble tasks, of "fighting the good fight and keeping the faith," is to Fichte the meaning of coming to a con-

sciousness of one's self. What is myself, my real self? It is not this phenomenal existence with its appearance of necessity. It is the eternal and everlasting duty within me. What is it to think myself? It is to think my duty; and to think duty is to think God. When I come to consciousness of myself, the cosmic order is coming so far to self-consciousness. Reality is so far attained. History is the record of this process of the moral order coming to self-consciousness.

In his later teaching Fichte succumbed to the victorious Spinozism of the period. He conceived God as an Ego whose infinite impulse is directed toward Himself; he conceived finite things as products of this infinitely active consciousness. The finite products find their vocation in imitating the infinite producer, which imitation consists not in the activity of producing other finite things through the categorical imperative, but in the "blessed life" of sinking into the infinite.

What a Moral Reality involves. Since reality is this process of moral development, its conditions will arise out of itself and be its own creation. Since the world is reason coming to itself, it must develop its own conditions out of its original task. All the acts of history must be explained as the original "deed-act," as Fichte calls it. Fichte thought that the whole business of philosophy consists in showing what is involved in this original "deed-act" of consciousness, this attempt of consciousness to think itself. Since self-consciousness is reality, this will be the same as showing what reality involves.

1. In the first place, consciousness always involves the consciousness of something else. To use Fichte's technical language, the Ego posits itself (since it is a moral process) and in the same act it posits a non-Ego

(which is the necessary object of consciousness). "The absolute Ego asserts a distinguishable Ego against a distinguishable non-Ego." It is like a boy who feels the call to become a lawyer. He asserts himself in that call, and at the same time in that assertion he creates his life's career. His career in the law is his non-Ego. Both the Ego and the non-Ego are creations of that absolute Ego, which is the ever surging duty or God. While both the Ego and the non-Ego are the creations of that absolute Ego, which is cosmic duty or God, yet each limits the other. Ego and non-Ego are correlative terms; both originate in the free act of God. The world is, therefore, the creation of the real self as the condition of its own activity. It even creates its sensations as the given materials of its knowledge. The world is the material of duty put into sense forms. While we create matter in order that we may be active in it, the spatial and temporal forms, its categories, limit our activities.

2. In the second place, this awakening of the Ego to a consciousness of itself involves a curious contradiction. Duty is by nature contradictory. Duty calls me to know myself and to perform my task, and yet in that call duty prevents the task from being performed. In attempting to know duty completely I am always under the condition of an opposing and limiting non-Ego. The non-Ego is essential to the Ego and at the same time thwarts the Ego's full knowledge of itself. So long as the non-Ego exists, no complete knowledge of myself is possible. A limiting non-Ego makes the Ego limited, and therefore prevents complete knowledge and fulfillment of duty. Duty calls upon us to perform a task, but under conditions such that it cannot be performed. So long as the boy strives in his legal profession, duty appears; but

so long is duty rendered incomplete. Moral progress is endless, but that only shows how contented we must be with the process of striving and not with some static condition. To strive morally is reality; the goal is nowhere. The contradiction is seen in the eternal contrast between what is and what ought to be, between the moral task and the actual performance. We are under the requirement to perform, and in the requirement is the restraint. The dialectic process is endless. First there is the stage which Fichte calls the Thesis in the call of the absolute Ego. The next stage is the Antithesis, seen in the mutually limiting Ego and non-Ego. The next stage is the Synthesis, in which some accomplishment is gained, but which becomes only the Thesis for another Antithesis; and so on infinitely. The terms Thesis, Antithesis, and Synthesis are important, for they are employed by Fichte's successors, Schelling and Hegel.

Romanticism.* "We seek the plan of nature in the outside world. We ourselves are this plan. Why need we traverse the difficult roads through physical nature? The better and purer road lies within our own mind." (Novalis.)

Romanticism was a great European movement which lasted about a century from 1750 to 1850; and it would be perfectly justifiable to speak of the intellectual period in Germany from Lessing to Heine as Romanticism. Rousseau and the French Revolutionists, Ossian, Scott, Wordsworth, Coleridge, Byron, Shelley, Keats, and Wagner were in the forefront of this world-wide movement. The Storm and Stress Period was a

* Read Beers, *History of Romanticism in Eighteenth Century*, pp. 1–25; Beers, *History of Romanticism in Nineteenth Century*, pp. 132–139.

phase of it; and so even was the Period of Classicism that followed. Goethe and Schiller were Romanticists, and Classicism was only an episode in their lives. The Period of German Classicism (1787–1805) was different from the Classicism of the seventeenth century, because it was thoroughly infected with Romantic germs. If one is to take account of the different phases of German thought after Lessing, one mentions first the Storm and Stress Period, then Classicism, and then the Romantic movement proper from 1795 to 1850. Some of the literary names connected with the Romantic movement have already been mentioned, — Richter, Tieck, Wackenrode, Novalis, the Schlegels, Schiller, and Goethe. Fichte, Schelling, and Hegel are the philosophers of this Romantic movement and embody its spirit in different degrees. The true philosophical exponent of it is Schelling.

Romanticism is an accidental and inadequate name for this world-wide literary and philosophical movement. In general it means the exalting of the individual, "who admits no law above himself." The Romantic individuality is dominated by unrestrained fancy, is animated by feeling and passion, and prefers the vague and mystical to the clear and defined. In literature Romanticism is contrasted with Classicism. The Classicist emphasizes the type, the Romanticist the individual. The Classicist defers to traditional form and law; the Romanticist has no common canon even with other Romanticists except the right to disagree. The only common principle among Romanticists is subjective — the truth of the individual intuitions, which in the case of the historical Romanticists found expression in the play of fiercely egoistic wills seeking self-realization.

The historical Romantic movement was a passionate and mighty reaction against the previous shallow intellectual life with its narrow conventions. Romanticism was a revolt against the period of the Enlightenment, which scorned what it could not define. These Romanticists were discontented with typical ideas and with logical reasoning about them. They challenged the universe, because it was not obedient to their egoistic cravings.

It is very clear what the dangers as well as the greatness of this German Romanticism were. The dangers of the movement lay within itself, in its aristocratic exclusiveness, its reluctance to face the forces of evil, its lack of strength and of firmness of character. Yet the age itself may be largely responsible for these. Its strength lay also within, in its deepening of self-consciousness, in its rejuvenating and ennobling the whole expanse of being, in its intellectual conception of man's most intimate relations to himself, to his companions, and to the world around him. Sometimes, indeed, the spiritual force of this small band shows itself quite capable of strong action in the outer world. Napoleon himself ascribed his downfall not primarily to diplomacy or to the bayonet, but to the resistance of the German Ideologists.

Goethe as a Romanticist. We have already spoken of the resurrection of Spinoza's doctrine and its acceptance as a model by this time. The Romanticists, following Spinoza, conceived of nature as a unity in which the divine manifests itself in its fullness. Nature is Reason in Becoming. So fitting, indeed, for the time was Spinoza's pantheism that Goethe, the literary exponent of the period, made it the central principle of his poetic thought. Goethe can be understood only as the Romantic Spinoza. The philosophy that underlies

Goethe's work is noted here as an example of the Romantic movement.

Like all the Romantic philosophy, Goethe's philosophy was a personal revelation, and not a formulated doctrine for universal application. Like all the Romanticists, Goethe was a highly strung personality, and his philosophy was conceived to be true by himself only for himself. He did not look upon the trivialities and the conventions of life as mere limitations of his personality, but as a fall from truth. *Truth is realized by man when he is in vital interchange with the universe.* Therefore Goethe was in full agreement with Spinoza in longing for emancipation from human littleness and in his desire for the infinite. Goethe differed from Spinoza's pantheism in his own way; for Goethe conceived man to have an independent function in the infinite. Man makes his contribution to history and does not merely passively appropriate the products of the world around himself. Man reacts upon the world, he resists it, and becomes alive to the joy of it.

To Goethe the world had a soul, because the world gives clearness to the human soul. Nature shows how closely she is related to us by disclosing to us her inmost soul. Here in Goethe is a mysticism in modern garb, an artistic view of life. Besides, the world expresses human experiences on a large scale, and the way to nature's heart is not to go behind nature-phenomena, but through them. The facts of nature are real, and our own life is like nature. Both move in prescribed orbits, but both are empty if the connection between them is severed. We find therefore the secret of our life by returning to nature, and this is a return to the spiritual whole of things. At different times Goethe

was pantheist, naturalist, and theist. He believed that all finite life is divine, and is a synthesis of opposite forces, in which individuality has a place. Humanity is ruled by necessary types, yet within them the individual is free. Such free individuals take their objects from the world, spiritually endow these objects, and thus make art and ethics very close to nature.

Romanticism in Philosophy.* The Romantic movement was intrinsically speculative and naturally had its representatives in philosophy, which is systematic speculation. Fichte and Hegel, but especially Schelling, are the philosophical exponents of the revolutionary spirit of the age. All three were demonstrators in philosophy of the truths and dreams held by ardent souls, but Schelling's system reflected the spiritual upheaval. Fichte belongs to the Romantic movement inasmuch as he strives for the infinite, but Fichte separates himself from that movement by distinguishing between consciousness and its content. The true Romantic spirit appears in Schelling — the impulse to revel in intuitions, in symbolism, to run riot first in nature and art, and afterwards in religion. The Romantic philosophers were friends and sympathizers of the Romanticists, living in the same city, sometimes in the same house, and were members of the same spiritual family. But it must be remembered that there was not one Romanticist leader with many imitators, but that each Romanticist followed out his own line. When we speak of Schelling as a Romantic philosopher we mean that he gives the speculative tendency of the many Romanticists his own clearer definition and formulation. The background of Schelling's philosophy is the source of

* Read Royce, *Spirit of Modern Philosophy*, ch. vi.

the Romanticists' motives. It may be stated under three headings: —

(1) Man's ideal is to expand his soul until it becomes one with God.

(2) There is no Thing-in-Itself. The finite world is only a limitation of the ego.

(3) Man and the nature world are essentially one. Man has a knowledge of nature when he has a knowledge of himself. In reading his own history he reads the history of nature. The Romanticist drew a veil from the face of nature and found there his own spirit.

The Life and the Writings of Schelling (1775–1854).* Of Schelling's long life of seventy-nine years, the fifteen years from 1795 to 1810 were the most important productive period. Like Berkeley, he was a many-sided genius, and began to write brilliantly in his early years. He published his first treatise at sixteen years, and before he was twenty he published several essays of distinct merit on Fichte's philosophy, the success of which led to his call to the chair of philosophy at Jena. All his technical works were written in an academic atmosphere. After 1812 he, so fond of writing, became silent. He even ceased to deliver lectures at the University of Berlin when he found that notes of them were published without his consent. Hegel, in commenting on Schelling, said that Schelling liked to carry on his thinking in public.

Schelling and Fichte may be studied together because they are alike in developing one side of Kant's doc-

* Read Eucken, *Problem of Human Life*, pp. 457–464, 490–494; Wernaer, *Romanticism and the Romantic School in Germany*, pp. 132–143; Rand, *Modern Classical Philosophers*, pp. 535–568.

trine. But their careers were very different. Contrasted with Fichte's life of poverty, struggle, self-created antagonisms, long-delayed victory, and devotion to rigorous morality, is Schelling's life of early academic success, prosperity, and romantic friendships. The life of Kant was one of inner development and outward routine; that of Fichte of early formulated thought and external warfare. Schelling's life, on the other hand, does not strike us as one of development, either externally or subjectively. It was rather a series of changes. He looked upon his own philosophy as a development, but its linkage is thread-like, due to his wonderful imagination and mobility of thought. With his great suggestive power, he depended more upon analogy than logic; his argument and his philosophy lie before us as if ever in process of continuous readaptation. Schelling possessed all the fervor and insight of the Romanticists, and all their egoism and caprice. It is even more difficult to characterize his philosophy than that of Spinoza. He was monist, pantheist, and evolutionist; parallelist, theosophist, and believer in freedom; he accepted the doctrine of the Trinity; in all this he was the true Romanticist. Schelling's philosophy of nature is intelligible only in the light of the great artistic ferment of his time and as the expression of his strong artistic personality. His ideal of artistic insight into nature became for him his idea of science. Reality is nature, and nature is a work of art, self composed and self renewing. The endeavor of Schelling was to fashion all human existence into artistic form. At first he looked upon nature as rational, but later he was impressed with its irrationality.

Schelling's life may be divided into six periods on the basis of the changes of his thought:—

1. *Earlier Period* (1775–1797). Schelling was the son of the chaplain of a cloister school near Tübingen, and was educated in history and speculative science in the university of that town. After his university education he held the position of tutor in a nobleman's family at Leipsic for two years. During this time he listened to lectures at the University of Leipsic on medicine and physics. Before he was twenty he had published several notable essays on speculative matters, among them *The Ego as a Principle in Philosophy;* and in 1797 *Ideas for a Philosophy of Nature.* These led to his call to a chair in the University of Jena. Schelling was early acquainted with the doctrine of Leibnitz, but the most powerful influences upon him at this time were Kant and, especially, Fichte.

2. *The Philosophy of Nature* (1797–1800). Schelling was called to Jena through the influence of Goethe, Schiller, and Fichte; and it was here that he completed what he had begun at Leipsic — the supplementation of Fichte's philosophy with a *Philosophy of Nature* (written 1798). He was colleague of Fichte and afterwards a helpful friend of Hegel. Jena was then the centre of the Romantic movement, the moving spirit of which was Caroline, the wife of August Schlegel. Schelling was very successful at Jena as lecturer, and his publications at this time were very many.

3. *The Transcendental Philosophy* (1800–1801). While still at Jena he felt the influence of Schiller, who had united the ideas of Kant and Goethe into an Æsthetic Idealism. Under this influence Schelling reconstructed the Fichtean philosophy of the Ego on a Romantic basis.

4. *The Philosophy of Identity* (1801–1804). Schelling now undertook to put his recast philosophy of Fichte upon the basis of Spinozism. This caused a break between him and Fichte and Hegel. In 1803 he married Caroline, the divorced wife of August Schlegel and the idol of the Romantic circle, and the same year accepted a call to the University of Wurzburg, where he remained three years (1803–1806).

5. *The Philosophy of Freedom and God* (1804–1809). The doctrine of Schelling now became mystical and showed the influence of Boehme. In 1806 Schelling was called to the Academy of Munich.

6. *The Philosophy of Mythology and Revelation* (1809–1854). This may be well called Schelling's period of silence, so far as publication was concerned. He who had poured forth his thoughts in print now became averse to publishing anything. He accepted the call to Munich in 1806 and remained there, excepting his seven years at Erlangen, thirty-five years (until 1841). During this time he was much under the influence of Aristotle, neo-Platonism, and the Gnostics. He had first an official position at the Academy of Munich; then he spent seven years as teacher at the University of Erlangen (1820–1827); and in 1827 he entered the newly founded University of Munich. In 1841 he was called to Berlin to counteract the Hegelian movement, and he became a member of the Academy with the privilege of lecturing at the University. He was now sixty-six, and he spent the remaining years in elaborating his system. He died in 1854.

A Brief Comparison of Fichte and Schelling as Philosophers. We have already spoken of the relation of Fichte and Schelling to the Romantic movement.

What is their relation as philosophers? Fichte's idealism is commonly called subjective because of his emphasis upon the Ego at the expense of the non-Ego. In non-technical terms Fichte gave no adequate philosophy of nature; for his assumption was that nature is only material for the reason. Nature to Fichte was only the stage upon which the reason could act. Fichte's keen insight into human affairs blinded him to the meaning of nature. The contribution of Schelling to the philosophy of nature was not therefore unwelcomed by Fichte; for he saw that such a philosophy could easily be developed from his point of view, provided nature be regarded as a unity in the service of the reason. *In brief, the development of Schelling over Fichte was this:* (1) Schelling added a science of nature to Fichte's science of mind; (2) Then he transformed Fichte's philosophy of mind into an æsthetic philosophy of mind; (3) Then he tried in several successive attempts to find a common metaphysical ground for his own philosophy of nature and his recast philosophy of mind. While the method of Schelling was not different from that of Fichte, his general motive was different; for to Schelling the universe must not be regarded as the creation of an active moral Ego, but as having an existence of its own. While for Fichte to think is to produce, for Schelling it is to reproduce. To the investigating mind of Schelling experience and observation are the sources of knowledge; yet it must not be inferred that Schelling's philosophy was inductive or that he *derived* the Ego from the non-Ego, as if the Ego had been evolved from the non-Ego. These were the days before the modern theory of evolution. Mind does not have its source in nature; on the con-

trary, mind and nature have a common source in the Reason. They have a parallel existence and develop according to the same law. Nature is existing Reason, mind is thinking Reason.

Schelling's Philosophy of Nature. Schelling started with Kant's early conception of nature as dynamic — that matter exists through the interplay of the forces of attraction and repulsion. The human organism is the highest expression of such dynamic activity. In the world there is nothing dead. Matter is the lowest expression of dynamic activity; the vegetable is next, the animal next, and the human brain is the consummation of this process of productivity. Thus matter on the one hand and mind on the other are the two poles of reason in nature. Everything is life movement; everything is the oscillation between two extremes, the interplay of contrary but correlative forces. In romantic terms, nature is the Self in Becoming. Nature is a living whole which manifests itself in an ascending scale of rich and varied forces between matter and mind.

Such a conception met consistently the demands of this Romantic period.* The high expectations of the physicists of the previous century had been unfulfilled, for they had not succeeded in obtaining a purely mechanical explanation of the derivation of life from matter. Darwin was still to come. Medicine, which was at that time showing great progress, offered no argument for the mechanical conception of the world. There had, however, been many discoveries at this time in electricity and magnetism; and these mysterious qualities seemed to repudiate the mechanical theory. Vitalism thus usurped the place of mathematics. Spinoza rather

* Read Shelley, *Love's Philosophy.*

than Galileo was the model of the time. Nature must be conceived as a unity in which the Divine manifests itself in its fullness.

All these influences appear in Schelling's first philosophical undertaking. He states philosophically what Goethe states poetically. Nature is not to be described in quantities nor measured by rule. It transcends measurement. It is to be truly understood only as productivity having organic life as its goal. Nature is rational life, not mechanism. Everything has its logically determined place. Schelling used the natural science of his time to show how the connection of forces and their transformation into one another were the manifestation of divine cosmic purpose. The gaps he filled in with teleological conceptions. He used morphology with the same purpose as Goethe. He felt the same need of a deeper meaning of nature than mathematics can give — the need of a rational purposeful meaning. Goethe shows this in his "Theory of Colors" when he looks upon colors not as atomic movements, but as something essentially qualitative. Schelling, too, was not an evolutionist in the modern sense, and he did not regard one species as derived from another. He thought of species in an ascending scale, to be sure; but he saw in each only the preliminary stage to the next, and all as the divine expression. One accomplishment of nature merely precedes another in time.

The nineteenth century looked back on this Romantic science as merely a fit of excessive sentiment that has impeded the modern work of serious investigation. Yet it may safely be said that the nineteenth century has not settled the question, and that nature will always need a rational as well as a mechanical explanation.

Schelling's Transcendental Philosophy. *The Philosophy of Nature* ends with the explanation of sensitivity; and it is there for Schelling that the philosophy of knowledge begins. When three years later Schelling was ready to reconstruct Fichte's philosophy of mind — when he was ready to break with Fichte — he was influenced by the great change that had come over the thought of the Jena idealists. This change was due curiously enough to the philosophy of the intimate friend of Goethe, the poet Schiller. Here again the proximity of Weimar and Jena was the cause of the reciprocal influence of philosophy and literature. Schelling was the first to give this new thought its philosophical expression. The theory of Schiller is an æsthetic idealism in which the artistic function supplants the moral law of Fichte and Kant, and is the fundamental reality of life.

When Schiller * reshaped Kant's moral philosophy he was not concerned, as might be supposed, merely with æsthetic results, but with conduct, history, and the whole system of metaphysics. The problem always uppermost in Schiller's mind was the place of art and beauty in the whole system of things. So when he tried to reconcile Kant's theoretical reason and Kant's practical reason, he naturally looked to art for such reconciliation. What is there that is both necessary and free? Beauty! "Beauty is freedom in phenomenal appearance." Æsthetic contemplation apprehends the beautiful object, and yet in so doing it transcends all the trammels and bonds of experience. The artistic ecstasy is freedom in necessity. It is independent of moral as well as intellectual rules. Beauty is as little an object

* Read Schiller, *Artists; Letters on Æsthetic Education.*

of sense as of will. It does not have the quality of need that belongs to sense phenomena, nor of earnestness that accompanies morality. Sense is obliterated; the stirrings of the will become silent. That which appears was called by Schiller the "play impulse." Toward the education of man Schiller thus offered art, while Kant had presented religion. Art refines the feelings, tempers the sensuous will, and makes room for the moral will. Yet the moral will is not the end; for art is not only the means of education, but the goal as well. Complete life comes when the conflict between morality and sense disappears in artistic feeling. "Only as man plays is he truly man." The ideal that Schiller formulated for this Romantic age was the "schöne Seele." While in the soul of man the Kantian rigoristic moral law exists when sense stands in opposition to duty, the "beautiful soul" does not know conflict because its nature is ennobled by its own inclination. This æsthetic humanism Schiller expresses for his time in antithesis to Kant's and Fichte's rigorism. Goethe impersonated this ideal in his life and represented it in his works. The Romanticists carried this conception to its extreme both in their practice and in their literary productions. Thus they came to stand for an aristocracy of culture, and in them "ethical geniality" culminated. The Romanticist contrasted himself with the "Philistine" who lives according to rules. The Romanticist would live out his own individuality as valuable in itself. He substituted the endless play of the imagination for Fichte's moral law, and was frequently very wayward and capricious. This is seen in Schlegel's *Lucinde*. Schleiermacher the preacher tried to preserve the purity of Schiller's doctrine.

In his construction of his own philosophy of mind Schelling adopted completely Schiller's theory of the æsthetic reason in what he called *Transcendental Idealism*. He looked upon the Fichtean antithesis between theoretical and practical reason as the same as that between the unconscious and the conscious activity of the Self. Theoretically, or from the point of view of the understanding, consciousness is determined by the unconscious; practically, or from the point of view of the will, the unconscious is the creation of consciousness. The practical or willing Self re-shapes the products of the nature world. For a thinking being is not merely a reflector or re-presenter of events as they occur in the nature world — as nature produces them. Thinking man is not merely passive. He re-shapes and transforms nature through the freedom of his morality.

But neither the series of passively apprehended events, nor the series of events transformed by the active moral will, is ever complete. Neither as a passive product of nature nor as a moral will is man a perfected being. In either condition man perpetually feels the contradiction, since he is neither wholly passive nor wholly active. The antagonism between will and sense is ever present. Man realizes the fullness of his Ego, when he transcends both will and sense, both morality and science, in the conscious-unconscious activity of artistic genius. This is the highest synthesis. In Schelling's lectures delivered at Jena on the philosophy of art, after he had written his *Transcendental Idealism*, he developed and applied this theory and it determined the subsequent development of æsthetics in the Jena circle. Kant had previously defined genius as intellect that works like nature; Schiller had defined it as play-

ing; Schelling looked upon it as æsthetic reason and the climax of the philosophy of mind. Art, and not logic, is the instrument by which the reason develops. Artistic reason is the goal toward which the reason aims.

The System of Identity. Schelling published his *Transcendental Idealism* in 1800. In the next year he published his *System of Identity* in the hope of finding some common ground for his two preceding points of view. For Nature is not absolute, but is a limited objective Ego; and Mind is also not absolute, but is also limited, although subjective. The Self perceives the object as other than itself, and in subsequent reflection it sees the object as a form of its own deeper Self. Subject and object, mind and nature, are one in reality. The question then is, Does the absolute Self exist? Yes, but outside the conditions of existence and beyond all contradictions. It is itself the highest condition, the unconditioned condition. But what is the basis of these two antithetical aspects of life? The most suitable name that Schelling could give it was Identity or Indifference; for other names would imply conditions. In this attempt to construct an absolute Idealism, Schelling shows the influence of Spinoza. Identity reminds us of Spinoza's substance, — a reality that is absolutely indifferent to both mental and nature phenomena, and yet is the reality of both. It is absolute reason undetermined in its content. It was this turning to Spinozism on the part of Schelling, that made Hegel break with him and call his Identity "the night, in which all cows are black." Schelling even came so much under the influence of Spinoza as to imitate Spinoza's form of presentation in the Ethics. But Schelling regarded the objective and subjective worlds not after the manner of

Spinoza as independent of each other. On the contrary he looked upon every phenomenon as both ideal and real, and as having its logical place according to the degree in which the two elements are combined. Differences are what constitute phenomena; the Absolute is the Indifferent. Schelling illustrates this by the magnet, which is itself an indifference of opposite poles of varying intensity.

In the nature series the objective factor predominates, and in the mental series the subjective factor. The universe is the most perfect work of art, the most perfect organism, and the best expression of God.

Schelling's Religious Philosophy. Romanticism took a religious turn at the beginning of the eighteenth century under the influence of Schleiermacher.[1] The motive of this movement was the thought that religious feeling lies below art. Reason can be completed only in religion, by which is meant not dogma, nor morality, but an æsthetic relation to the world-ground, a pious feeling of absolute dependence. It is the feeling of being permeated by the Absolute. Schleiermacher taught in the true Romantic spirit that religion is an individual matter and is different from church organization. Thus in this time of quickly passing shades of imaginative thought Schiller idealized Greece and Schleiermacher the Middle Ages. Susceptible as he was to every idea of his time, Schelling embodied this teaching of Schleiermacher in his later teaching. With the other Romanticists he expected that the concept of re-

[1] F. E. D. Schleiermacher, b. 1768; educated in the Herrnhuten institutions and at the University of Halle; in 1796 preacher at the Berlin Charité; in 1802 court preacher at Stolpe; in 1804 professor extraordinary at Halle; in 1809 preacher at a church in Berlin; in 1810 professor in Berlin University.

ligion would furnish a final basis for the solution of all problems, overcome all antitheses in an inner harmony, and bring about the eternal welfare of all.

Schelling now no longer called the Absolute Indifference, but God or Infinity, and he conceived Him as possessing modes and potencies. In the development of this new line of thought he introduced the neo-Platonic doctrine of Ideas as God's intuitions of Himself, and as intermediaries with the world. Later Schelling passed through another change, and this doctrine grew under his hands into a theosophy and a theory of the irrational. The influence of Schelling was eclipsed by Hegel after Schelling retired to Munich; and Schelling saw his rival in control of German academic thought for many years. But he had the satisfaction in his old age of being called by the authorities to Berlin as the official spokesman against the Hegelian doctrine.

Hegel and the Culmination of Idealism. We have divided the philosophers after Kant into two groups; (1) Fichte, Schelling and the Romanticists, and Hegel; (2) Herbart and Schopenhauer. In this first group, which we have at present under our eye, Fichte is the ethical exhorter, Schelling the Romantic nature-lover, and Hegel the intellectual systematizer. Fichte's conception of Reality is always an ethical ideal unrealized, in whose cause men are called to fight for conviction's sake. Schelling points to the beauty of nature's productivity as a reality that lies hidden in mystery. Both these theories show profound insight into life and both are expressive of the period in its attitude toward life. Fichte is the type of the Puritan idealist; Schelling the type of the sentimentalist. Yet both, even from the point of view of the Idealism of the period, were par-

tial expressions. Idealism was a social movement; and like all social movements must run its course. It would not stop until it had culminated in a full and systematic formulation. This was found in the philosophy of Hegel. The social forces of the eighteenth century had been gathering a momentum, which naturally came to a magnificent climax. On its political side this movement culminated under the leadership of the greatest of all political idealists, Napoleon Bonaparte, in 1815 at Waterloo. On its intellectual side it reached its completion in the philosophical system of Hegel. Hegel died in 1831, and his intellectual kingdom, like the political kingdom of Napoleon, was immediately shattered. But the observer of the currents of history will find much significance in the stubborn persistence of the intellectual phase of the Idealistic movement long after its political dominance had gone. Hegel ruled the intellectual world of Germany from Berlin for sixteen years after the battle of Waterloo, and his philosophy was officially recognized by the Berlin authorities. This stubbornness of the realm of ideas can be exemplified throughout history, for it requires more than one political earthquake to demolish a well-organized intellectual theory.

Hegel may be said to have drawn the scattered threads of the preceding idealists into a system. Like them, he firmly grounded his philosophy on the Kantian epistemology. Like them also, he sought to find absolute reality by means of the conscious Ego. This only means that all three were idealists. But Fichte's conception of the Ego was only partially formed. It could not be an absolute reality, since it needed to be confronted by a non-Ego in order to assert itself and

live. Hegel was discerning enough to see that Reason was more fundamental than either action, purpose, or consciousness itself. To him both the Ego and the non-Ego were in essence Reason. The Ego could not know that it had created the non-Ego unless the Ego was in the beginning rational. To distinguish the Ego from the non-Ego, there must be some ground of similarity upon which both are based. In his search for this ground Hegel at first allied himself with Schelling. The brilliancy of Schelling's thought dazzled him. Then he saw that Schelling only led back to the abstract universal of Spinoza. A mystical "black night" Identity was not actual nor did it explain anything actual. It merely said that the Absolutely Real is unknowable. This is too easy a solution of the complexity of life. Having neither meaning nor actuality, it cannot explain the actual concrete and meaningful things. The Absolutely Real must be a universal, but it must also be concrete. History has been the Reason in its toil and travail. The Absolutely Real must include history and it must be Reason. With Fichte the "deed act" had primacy, with Schelling the æsthetic feeling, with Hegel the Reason as an articulated series of concepts.

Why Hegel remains to-day the Representative of Kant. There were several reasons why Hegel remains the representative of Kant: —

1. He had more learning and ability than the other post-Kantians.

2. His own interpretation was an interpretation of facts. By the other post-Kantians things are not represented as they are, but as they have been transformed. Hegel, however, was a respecter of things as they are. Hegel was possessed of no sentiment. He was a satirist;

although a romanticist, he was an encyclopædic historian as well. He was a philosopher in that old-time sense of wishing to know the nature of things.

3. He was fortunate in his application of Kant's doctrine to evolution. It proved to be the beginning of the movement which appeared later in Darwin. People were going to be evolutionists in the nineteenth century, and Hegel played into their hands and helped evolution.

4. Hegel gave to his philosophy the air of orthodoxy. In the nineteenth century there was a desire for Christianity that was orthodox. Hegel offered no objection to allowing that interpretation to be placed upon his philosophy.

The Life and Writings of Hegel (1770–1831) The slow movement of Hegel's diction is paralleled by his gradual development in thought. He was the most painstaking metaphysician that ever completed a philosophy. While he was lacking in the painful hesitation that made Kant consume so much time in introductions as to have little for the body of his discourses and none for the completion of his philosophy, he was nevertheless a plodding, careful, and prosaic thinker. As a boy he showed these traits without showing any predominant taste or capacity. "He was that uninteresting character — the good boy who takes prizes in every class, including the prize for good conduct." As a man he was shrewd and reserved, overbearing to his inferiors and opponents, and even patronizing to his superiors. He was the type of the pedantic teacher who brooks no

* Read Royce, *Spirit of Modern Phil.*, chap. vii; James, *Hibbert Journal*, 1908–09, pp. 63 ff.; Eucken, *Problem of Human Life*, pp. 494–507; Rand, *Modern Classical Philosophers*, pp. 569–574, 583–592, 614–628.

opposition. Like Kant's, his life was entirely academic, but unlike Kant's, his experience was in many university circles — Tübingen, Jena, Heidelberg, and Berlin. His thirteen years at Berlin were remarkable, not only for his philosophical dominance, but for his influence in society and court. The official recognition of his philosophy by the Berlin authorities was a detriment in the end; for immediately after his death, in 1831, it lost its influence. Hegel had succeeded Fichte at Berlin, and by the irony of fate, Schelling, already an old man in Vienna, was called by the Berlin authorities to combat Hegel's influence. Hegel's followers, after his death, became engaged in angry disputes over their interpretations of their master's philosophy. His philosophy was attacked by Herbart. The intellectual world turned away from him to empirical discoveries and the doctrine of evolution. In twenty years Hegel's influence was insignificant, and to-day his name is scarcely mentioned in the lecture room of a German university. His influence is, however, growing and powerful in England and the United States. Still it must be said that even in Germany no one has so dominated the direction of jurisprudence, sociology, theology, æsthetics, and history (a science which Hegel himself created). Hegel's erudition, his ability to systematize, his power of discrimination, are sufficient to explain such influence. The illumination that his philosophy gives, lies less in his metaphysical theory than in his application of it to history and tradition. He won adherents, not by his abstruse arguments that so few can understand, but by illustration; not by his demonstration of the Absolute, but by showing how that Absolute is what the religious devotee seeks, what the moralist presupposes and the

historian recognizes. In carrying out his theory in detail he arbitrarily fitted his facts to his theory, especially in the philosophy of nature, the history of philosophy, and history. In the realm of pure thought, where conceptual facts are dealt with, this is not so apparent. He was successful, for example, in the science of æsthetics.

Hegel's literary style is difficult, and his technicalities are almost barbarous. He uses philosophical and common terms with meanings to suit himself. He loves paradoxical phrases, and is pedantic in his insistence on systematic arrangement.

1. *Formative Period* (1770–1796). Hegel was born at Stuttgart in 1770, and in the years between 1788 and 1793 he studied philosophy, theology, and the classics in the University of Tübingen. Among his companions there were Schelling and Hölderlin. From 1793 to 1796 he was a tutor in Switzerland, where he made a further study of Kant.

2. *Formulation of his Philosophy* (1796–1806). Hegel formulated his philosophy for the first time in the four years (1796–1800) of his life at Frankfort, where he was acting in the capacity of tutor. In 1801 he became privat-docent at Jena through Schelling's recommendation. He edited a philosophical journal with Schelling, and the two were friends so long as Hegel found Schelling's assistance of value to himself. When, in 1803, Schelling left Jena, Hegel began to criticize his former friend's philosophy. Hegel was appointed professor of philosophy at Jena in 1805.

3. *Development of his Philosophy* (1806–1831).

1806. He wrote the *Phänomenologie*, which was published in 1807.

1807. The university was discontinued after the battle of Jena, and Hegel went to Bamberg to edit a newspaper.

1807–1815. Hegel was at Nuremberg as teacher in its gymnasium, and in 1811, at the age of forty-one, he married.

1812–1813. He published his *Logic*.

1816–1817. He was professor of philosophy at Heidelberg. He published his *Encyclopædia*, which consists of three parts: Logic, Philosophy of Nature, and Philosophy of Mind. This was enlarged in 1827.

1818. Hegel succeeded Fichte at Berlin, where he met with marked success, and where he exercised a very wide influence. When Hegel came to Berlin his philosophical theory was already formulated, and his thirteen years at Berlin were spent in illustrating and verifying it in history.

1831. At the height of his fame, he died of cholera.

Realism, Mysticism, and Idealism. It will not be amiss at this point to contrast three of the great types of human thought, — Realism and Mysticism with the Idealism of which Hegel was the consummate expression. The Idealistic Period of European thought is confined within the forty-one years between 1790 and 1831. Moreover it is a world-wide movement, the philosophical expression of which is restricted to the German people. Mysticism and Realism represent the civilizations of longer periods and of many peoples. Mysticism is, for example, the attitude of mind frequently found in the Middle Ages in Europe, and may be roughly said to be the philosophy of the Oriental peoples. Spinoza was a belated mystic and its best European exponent; and against the revival of Spinoza's Mysticism during this

period Hegel as an idealist took his stand, Realism has been a popular philosophy in all civilizations at all times, and it was the irony of fate that Realism followed directly upon Hegel's long period of dominance as an idealist. Modern science is based on Realism, and so, on the whole, was Greek civilization. In contrast to Realism, Idealism represents a few years of history and has been confined to a limited civilization, yet for profundity of insight into the meaning of life Idealism is the consummation of human reflection.

Since "philosophy lends itself to extended discourse," it is quite impossible to contrast these theories briefly in more than a crude way. From the mystic's point of view, absolute reality is that which can be immediately apprehended. However, since immediate intuition is always undetermined, the mystic's reality is a very vague and abstract thing, although for him it is none the less real. Such a reality is not usually sought in the "world of nature"; for nature objects are very definite, besides being very transitory. The mystic's world of reality is within; therefore God to the mystic is to be found within the soul and is to be contrasted with the unreality of the world of sense. There is only one reality, and that is within the soul; all else is an illusion. Reality is gained by direct knowledge and never by the process of logical reflection. Mysticism is frequently allied with æsthetics; the love of God is apparently the same as the love for a work of art; the immediate intuition that the soul has of God apparently is the same psychological process as the artistic ecstasy over a thing of beauty. Both result in the absorption of the soul in its object, and in the presence of either all else seems illusory. Now Realism is a theory that is more easily defined

than Mysticism. It is simply the conception of many realities independent of one another and of the thinking mind. Reality is not one, it is a plurality of independent things, all of which are independent of the thinking process. Such realities are not undefined. As in Idealism, our knowledge of them is a definite matter of reflection; but against Mysticism, such definite knowledge is proof of their reality.

This can be illustrated by the series $1+\frac{1}{2}+\frac{1}{4}+\frac{1}{8}\ldots 2$. Let the number "2" represent the reality or meaning of the infinite series, which, however far extended, never reaches "2." Let the series itself represent the definite processes of phenomenal nature. The Realist would say that only the increasing series is real, and the "2" is an unknowable. The Realist admits that the series is fragmentary and incomplete, but it is quite definite and certainly the best we can do. It is at least exact and scientific; and the goal of scientific knowledge belongs to the realm of the attainable. On the other hand the Mystic maintains that, since exact knowledge attains only the changing and phenomenal, exact knowledge is illusory. When we cannot attain the real by effort and sense knowledge, why waste our time in seeking to do so? Reality is right at hand — in one's self. To the Mystic the infinite series of fractions is unreal, because it is and always will be incomplete. The ideal "2" can be got by direct and intuitive knowledge. Thus to the Realist the infinite series is real and the goal "2" is unreal, while to the Mystic the "2" is real and the fractions of experience are unreal.

Hegel felt profoundly convinced that neither Realism with its definite realities nor Mysticism with its undefined goal was an adequate explanation of the world and

life. The truly real must not only be definite, but it must also be all-inclusive. It must not on the one hand be incomplete, nor on the other must it be vague. It must be both the number "2" and the infinite series leading to "2." A truly and absolutely real must be the explanation of everything that happens, — joy, evil, necessity in nature, every least event and change. In the light of the idealism of Hegel the solutions of the Mystic and the Realist seem to fade in importance, and the problem of life seems to grow in significance and meaning.

The Fundamental Principles of Hegel's Idealism. In contrast with Mysticism and Realism, as well as with the doctrine of Fichte and Schelling, Hegel tried to formulate a conception of the universe that would include everything and yet be an organic whole. In what terms can this world of richness and variety, of coördinations and contradictions, be conceived as a single whole? How can it be one and still be many? Hegel saw clearly that this was his problem. The truly absolute must be a unity, and still be absolute.

There are two fundamental principles upon which his doctrine rests: (1) *The world must be conceived in terms of consciousness.* To any one who has studied the principles of psychology, or who has followed Kant's epistemological analysis, it is clear that the only real unities are conscious unities. The characteristic of consciousness is synthesis. This is what we mean by consciousness, and consciousness is unique in this. (2) *The world as a conscious whole must be essentially a world of contradictions.* We must accept contradiction, and not consistency as the fundamental and explanatory principle of life. In science and our ordinary human

problems we try to get results that are logically consistent. This is useful, but in doing so we do not get a full explanation. We omit in such calculations life's negations and incongruities. But do not inconsistencies and negations and incongruities exist? They certainly do; everything has its opposite; and if we will take the pains to observe the processes of thought, we shall find that thought is fundamentally inconsistent. Why do we usually regard thought as a self-consistent process? Because our methods of formal logic are such. In formal logic we reason smoothly and consistently from the premises to the conclusion. If we look more deeply into thought, we shall find that such consistency is made possible by ignoring the inconsistencies necessary to the very being of thought. The question therefore is not, Can the cosmic whole be conceived as consistent? but *What is the law of its inconsistencies?*

Let us consider these two principles of the Hegelian philosophy more in detail.

The Cosmic Unity. Hegel insists on the old truth that thought is self-operating within us. Thought belongs to our nature, yet it controls our nature. Thought develops consequences without regard to the will and demands that contradictions shall be solved. It is not correct to say that we think, but rather that thinking goes on within us. Thought is the life of the world. Thought is a process which embraces all things and projects them. Hegel emancipates thought from all the limitations of human minds. He would make thought objective and transform reality into thought.

Thus Hegel conceives that this self-operating thought within us is essentially the reality of the universe. Thought is the great cosmic undercurrent that includes

all things in its sweep. Indeed, the universe cannot be conceived as a unity unless the universe is conceived as a cosmic consciousness or reason. The true study of the nature of the world is cosmic logic, and philosophy becomes in Hegel's hands panlogism, — universal logic. Kant restricted the categories of thought to the human understanding; Hegel universalizes them and they become categories of the cosmos. For if the reality of the world is conscious reason, the categories are not only the forms of thought, but also the modes of being. The categories are, therefore, more comprehensive than Kant supposed. To use a term from the Middle Ages, they are "substantial forms." They are at one and the same time the forms that mould thought and the stages of eternal creation. The knowing process and the cosmic process are one and the same — one writ small and the other writ large. They are not separate from each other, but are the transformations of one Being. If we would study the cosmic forms, let us study thought-forms. Logic is really ontology; the study of the genealogy of thought is the study of Being. The real is reason, and the reason is real. By reason Hegel does not mean intuition or even immediate perception, which Fichte and Schelling claimed to be the fundamental principle of the mind. The reason which Hegel is talking about is the concept or general notion. All actuality is the development of the general notion in a necessary and self-creative movement. History, matter, and thought are exhibitions of the divine Idea. "All Being is thought realized and all Becoming is a development of thought."

Hegel's philosophy is a monism of reason, — a universalized concept, in which everything has its divine place. It is an all-embracing system, moulding every depart-

ment. Mind and matter are not aspects of a reality which is behind them, but are the modes of that reality. The cosmic reason is successively mind and matter, and not the principle of mind and nature. In Schelling things proceed from the absolute. In Hegel they are the absolute. The absolute does not exceed things, but is wholly in them as their organic unity. Everything is under the conceptual labor of thought. The important thing is to refer all our complex states to the unifying cosmic concept and have one illuminating idea. Absolute reason is absolute movement — the perpetual movement of life. Yet this absolute reason — the reason that refuses to change according to our likes and dislikes — is its own law and goal. The cosmos is the law of reason and has as its end its own unfolding self-consciousness. It is not the purpose of philosophy, according to Hegel, to tell what the world should be, but to recognize its nature as rational.

We must, therefore, be careful to distinguish Hegel's conception of the unity of God from that other conception of Him as a quantitative, single, and isolated unity. An isolated and single Being would imply the existence of other isolated Beings. Such an individual would be limited by others and dependent upon them. In technical terms sameness with one's self implies difference from others. A good example of the conception of an isolated God can be found in modern theology; such a God is a unity, but He is only the greatest of the several powers in the universe. Such an One is not an absolute, for the One to be absolute must be all that there is. Limitation implies something else. *Das Wahre ist das Ganze.*

But Hegel does not mean by the Oneness of God an

aggregation of parts, nor does he mean a system or arrangement of parts. An aggregation of parts, however big, is never complete and cannot include all that there is. An aggregation, even if it includes the past and the present, is not Absolute. The temporal series points to something else to give it meaning; and yet Reality must not stand outside any part of the temporal series. The Absolute Reality must include the temporal series, and yet the temporal series is not in itself Reality. Neither does Hegel mean that Reality is a system or society of individuals, whose knowledge and will imply one another; for such an organization of individuals also has its meaning in something below it.

The Absolute Reality is a spiritual individual. It is a unifying consciousness, which is self-moving, subjective, and active. "It is the Idea that thinks itself and is completely self-identical in its otherness." It cannot be abstract thought like Spinoza's God, for the Absolute must be actual. Nor does Hegel mean by Reality merely life or vitality, as Haeckel has conceived it in modern times; for these, too, are only abstract terms. "It is pure personality which alone through the absolute dialectic encloses all within itself." Reality is an Absolute Cosmic Spirit engaged in its self-discovery and self-appropriation by means of its own movement; and this movement is revealed in art, religion, and philosophy. The Absolute is, as Shelley makes the Earth picture man in *Prometheus Unbound*,

> "One harmonious Soul of many a soul,
> Whose nature is its own divine control,
> Where all things flow to all, as rivers to the sea."

The panorama of *history* is the progressive knowledge of the Absolute appearing under successively more

adequate forms. *Morality* is the Absolute in ever enlarging social relations. *Religion* is the Absolute in personal relations to man. *Philosophy* is the Absolute in reasoned apprehension of himself. The Absolute is not to be conceived in anthropomorphic terms, but is the world-process realized as an individual self-consciousness. It is cosmic consciousness become more significant. It is Being regarded as an individuality and including all development.

The Cosmic Law. If the cosmic unity is a cosmic synthetic consciousness, it must be subject to the law of reason which is fundamental in consciousness. The process of consciousness is an unfolding. It is an evolution, but an evolution that is an unfolding. Ordinarily biological evolution restricts itself to the particular type under consideration. It does not take account of the fact that the growth of one type means the destruction of another. It does not view nature in a universal way and consider construction and destruction, action and reaction, equal. It looks upon development as a process along a tangent or like the infinite series of numbers. But the destructions, the defeats, the reciprocal retrogressions, must be accounted for in a truly Absolute consciousness. Evolution is not therefore an upward advance, but a closed circle. The Absolute is not therefore a consistency, but includes contradictions; and evolution cannot truly be interpreted in quantitative but in qualitative terms, as the unfolding of consciousness. The only way to include everything in the Absolute is to think of the Absolute as coming to a consciousness of itself. The Absolute Reality is the same at any temporal beginning or ending. Its meaning is becoming clearer to itself alone. Such clearness appears in the clearness with which the

categories which are the forms of any consciousness become related. The task of philosophy is not to understand these forms together or *seriatim*, but as moments of a unitary development. They are the links in the development of Spirit, God, the Idea, or the Absolute.

What is this law of spiritual circular development? What are the categories of the cosmic Ego? How can the cosmic organism take account of the contradictions as well as the consistencies of life? The three necessary categories or three fundamental conceptions of the cosmic consciousness are "to be," "to be denied," "to be transcended,"—Thesis, its Antithesis, and the Synthesis of the two. In other words they are Assertion, Contradiction, and Return-to-itself. The cosmic law is the Law of Negativity. It is a dialectic process in the union of contradictories, of extremes meeting, of the equality of action and reaction. In Hegel's hands contradiction becomes the very principle of cosmic harmony. It is the struggle of thought to comprehend itself by using its own contradictory and created experiences for such comprehension. "The phenomenon is the arising and passing away which itself does not pass away, but exists in itself. It constitutes the movement and reality of the life of truth." The law of human consciousness is this: Assume the truth of any doctrine. Examine it and you will find it in some detail asserting not only its own contradiction or opposite, but also the relation between its assertion and its contradiction. The truth lies in the assertion that transcends the two opposites. The law of the cosmic consciousness is the same. Any stage of history appears in the conscious assurance of the truth of the principles upon which history is founded. But any such assertion by any epoch arouses opposition; and the

next stage in historical development is the assertion of principles that synthesize the assertion of the previous epoch and the opposition to it. The law of consciousness drives history to oppose its own self-assertions and then to a deeper apprehension of itself in a higher assertion, until it finds rest in the knowledge of the Absolute Idea — *that Absolute Truth is continuous contradiction.* Perhaps Hegel's most notable contribution to modern thought was his emphasis upon the tremendous power of negation and the stimulating force in contradiction. Spiritual advance is made through opposition.

Hegel's Application of his Theory. Formulating his theory in 1800, Hegel spent the most of his literary career in exemplifying it. The *Phänomenologie* (1807) is an attempt to show the natural history of thought in experience. He shows there the series of stages through which the mind passes, — stages corresponding to logic, to the growth of the individual, and to society. In the dialectic movement, consciousness views the world in an external way until it becomes self-conscious; then reason is evolved as a synthesis of the two: *i. e.* of external consciousness and self-consciousness. Reason then develops by continually turning back upon itself into an ethical, religious, and, lastly, an absolute reason. Hegel wrote his *Logic* (1812) as an application of his theory to thought — regarding thought as consisting of general concepts. Then came his *Encyclopœdia* (1816), containing his *Philosophy of Nature* and *Philosophy of Mind.* In his *Philosophy of Nature*, nature is regarded as revealing the same dialectic as logic, but in the external world. Nature, therefore, stands to logic as its antithesis. The *Philosophy of Mind* places mind as the synthesis of logic and nature, and elaborates the

subject as mind, objective mind, and the synthesis of the two, or Absolute mind. Thus the dialectic of the *Logic* is repeated and applied to the *Philosophy of Nature* and the *Philosophy of Spirit*. Logic and history are therefore parallel. The content is always the same in both; and the development is always in logical forms. The Absolute Idea by differentiation with itself comes to itself: (1) in Logic through Being, Essence, and Idea; (2) in Nature through matter, individual forms, and organism; (3) in Spirit through consciousness, self-consciousness, reason, right, morality, social morality, art, religion, philosophy. Logic is the Spirit *an-sich;* nature is the spirit *für-sich;* mind is the Spirit *an-und-für-sich*.

CHAPTER XII

THE PHILOSOPHY OF THE THING-IN-ITSELF

Herbart and Schopenhauer. The main line of development of the critical Kantian movement was the idealism of Fichte, Schelling, and Hegel. It was the most perfect expression of the period of German philosophy. There were, however, so many distinct elements in the Kantian doctrine, and these were so loosely tied together by Kant, that one is not surprised to find many divergent lines of its subsequent elaboration. It is difficult to classify all these later philosophers. But most prominent in this group stood Herbart and Schopenhauer. Herbart was a Realist, and Schopenhauer a voluntarist and pessimist. They had a common ground and motive for their respective philosophies, and may be placed together in the second group of the disciples of Kant. They were allied (1) in their emphasis upon the importance of the thing-in-itself and (2) in their strong opposition to the idealist movement. While both published their principal writings before the death of Hegel in 1831, both lived to the middle of the nineteenth century and both represent the reaction against the period of idealism. They speak more for the subsequent nineteenth century than for German ideals and Romanticism. They represented a certain feeling of the time that Kant's doctrine had not received its due at the hands of the Idealists.

Some philosophers had remained true to Kant, but they could not get the public ear until they were reinforced by the positive science and historical criticism of the second quarter of the nineteenth century. Bands of

men had gathered to study Kant even while Idealism was dominant. These were not professional philosophers, but politicians and others engaged in active service. Kant himself in his later years protested against his "false disciples." Fries and Herbart, even though pupils of Fichte, were true to Kant; and turned attention away from idealistic construction to an examination of the psychological foundations upon which the Kantian criticism rested. Herbart was the most prominent of the empirical psychologists and physicists who turned away from the speculative tendency back to Kant. Schopenhauer was the early spokesman for that mysticism and pessimism which characterized the nineteenth century and appeared in the music of Wagner, the literature of Ibsen, and the philosophy of Von Hartmann and Nietzsche.

What discredited Hegelianism in particular and philosophy in general in the eyes of the nineteenth century was (1) the errors of Hegelianism as to facts; (2) the patronizing tone of the Hegelians toward scientists like Copernicus, Newton, and Lavoisier; and (3) the refusal of the Hegelians to test hypotheses by facts. The opposition against Hegel was against his principles, his method, and his conclusions. At the downfall of Napoleon the age gave up the hope of reconstructing the world either politically or philosophically. The new spirit was scientific and positive. It tried to accept the world as it found it, and to explain it mechanically so far as it could be done. Things are not the creation of thought, and thought cannot change the reality of things. We must observe and experiment, since we cannot construct. We must restore the boundaries of Kant. Yet both Herbart and Schopenhauer were true to the spirit that

inspired German idealism, for they could not develop their philosophy of education, psychology, or art except upon a metaphysical background. Metaphysics was necessary. It was as necessary a foundation to the Germans as ethics to the Greeks and psychology to the English.

Johann Friedrich Herbart.* As "a Kantian of the year 1828" Herbart claimed to have carried the Kantian doctrine a step further by disclosing its psychological grounds. He insisted that analysis was the only true method; and he contended against Fichte that it is impossible to deduce the theory of the world from a single principle. An all-inclusive principle may be the conclusion, but not the premise, of a philosophy. Thus his thought moved in exactly the opposite direction from the monism of the Idealists and Schleiermacher, with which he was in constant hostility. Experience proved to Herbart the existence of independent realities; and he could not reconcile himself with the *a priori* doctrine of the idealists, which begins by denying the existence of the Thing-in-Itself. On the contrary, philosophy to Herbart had the Thing-in-Itself as its chief concern. Herbart did not see how paradoxical his position must be — how futile must be the results of attempting to know the unknowable. He was impressed with the depth of the problem of existence, and he felt that, if it was to be explained at all, it must be along scientific lines, especially in the fields of psychology and education. The scientific method of Herbart was mechanics; his Realism was the result of his method.

Herbart's programme at the beginning of his teach-

* Read Ribot, *German Psychology of To-day*, pp. 24–67; Weber, *History of Philosophy*, pp. 536–543; Dewing, *Introduction to Modern Philosophy*, pp. 230–235.

ing at Göttingen in 1802 was as follows: He defined philosophy in a general way by simplifying the concepts that underlie the different sciences. Thus he (1) reconstructed Realism, (2) restored the principle of contradiction, and (3) established philosophy on the same basis as science. Of all the philosophical schools in the nineteenth century the Herbartian school was the most numerous and compact. Hegel's attitude had driven many thinkers into science, and the majority of them attached themselves to Herbart for want of something better.

The Life and Writings of Herbart (1776–1841). Herbart was the typical scholar. He was a man of quiet and conservative tastes, and his life was never disturbed by dramatic situations arising out of contradictions in his character or environment. His days were spent in study, lecturing, and efforts for social education. The philosophical influences upon his thought were Leibnitz, Kant, and negatively the Idealists. In his early life he had read Leibnitz and Kant, and before he was eighteen he had read enough of Fichte to be repelled by his doctrine. In 1796 he was a student at Jena. From Jena he went as tutor to Switzerland, where he met Pestalozzi and laid the foundation of his own philosophy. In 1802 he was called to Göttingen, where he became full professor in 1805. In 1806 he published *Principal Points in Metaphysics*. In 1809 he was called to Königsberg, where he published his chief works: —

1813 *Text-book of the Introduction to Philosophy*.
1816 *Text-book of Psychology*.
1822 *Possibility and Necessity of Applying Mathematics to Psychology*.
1824–1825 *Psychology as a Science*.
1828–1829 *General Metaphysics*.

In 1830 he was called back to Göttingen, and he died in 1841.

The Contradictions of Experience. All the conceptions of practical life are self-contradictory and are therefore vicious. This applies not only to the conceptions of unreflecting minds, but also to those of scientists and philosophers. To philosophize is nothing else than this: to free our conceptions of their self-contradictions by simplifying and revising them. We think of the world as consisting of things, persons, relations, and laws; but such a view of the world is founded upon the fallacy of thinking an object at the same time as one and as many. This general fallacy takes four specific forms: inherence, change, continuity, and selfhood. For example, it is contradictory to think of a plant as one thing in which many qualities inhere; it is contradictory to think of a plant as the same when it passes through many changes; it is contradictory to think of space as continuous and yet divided into parts; and it is contradictory to think of the self as always the same and yet as a stream of conscious states.[1]

The Argument for Realism. This inherent contradiction in human conceptions had been a matter of observation by philosophers for many centuries, but it had led to many divergent conclusions. The Greek Skeptics had long ago observed it, and had concluded therefore that there is no such thing as reality. To them thought is discredited because the contradictions of thought are insoluble. Truth does not exist. On the other hand Hegel developed his great dialectic system upon the basis of these contradictions. Is thought self-

[1] A discussion of these contradictions can be found in any text-book in metaphysics.

contradictory? Yes. But is thought discredited because it is self-contradictory? By no means. It is the nature of thought to be self-contradictory, and the highest truth is the knowledge of this. So Hegel, instead of rejecting the conception of reality because thought is contradictory, incorporated contradictions into his conception of the Being of the universe. Indeed, he made contradictions the "head of the corner" of his system. Contradiction to Hegel is cosmic law. However, in such a conception Hegel had to give up entirely the principle upon which formal logic was founded. This was the principle that a thing cannot be different from itself. To Hegel the highest truth was exactly the opposite — everything is self-contradictory.

While Herbart agreed with the Skeptics and with Hegel that experience is self-contradictory, he differed from them in the inference which he drew from such contradictions. In acknowledging the contradictions of experience Herbart did not find himself driven to either one of these alternatives. Philosophy did not mean for him skepticism. On the other hand he was repelled by the turn that Hegel had given to logic, and he refused to accept reasoning as a self-contradictory process. He returned to the demands of formal logic and restored the principle of contradiction[1] to the place which it had occupied during the Enlightenment. Herbart took as his *fundamental philosophical principle that experiences are not actual when they are self-contradictory.*

The self-contradictoriness of experiences shows that they are phenomena and not actualities. It also shows

[1] The "principle of contradiction" in logic is the prohibition to commit contradiction.

that they have reality as their ground. Seeming things imply realities as the ground of their qualities; seeming occurrences imply actual relations between the reals. Seeming is just so much an indication of Being. Consistency lies behind phenomena. The existence of appearances must be admitted, but appearances are appearances of something. If nothing existed, nothing would appear to exist; and yet things are not in reality what they appear to be.

Herbart agreed with Kant that we can experience only phenomena. There is also a similarity in the two theories as to the relationship between phenomena and the thing-in-itself. The similarity is, however, only superficial. Kant reasoned from the relativity of phenomena to the synthetic unity of apperception, *i. e.* to consciousness in general, while the thing-it-itself was to Kant an unknowable and irreducible remainder. To Kant phenomena pointed to consciousness rather than to things-in-themselves. On the other hand, Herbart reasoned from phenomena to the existence of things-in-themselves. Phenomena point to an independent, objective reality rather than to a thinking subject. While in Kant's doctrine phenomena depend for their existence upon the creative power of consciousness, to Herbart consciousness has no creative power, but itself depends on the existence and independence of a plurality of independent Reals. Even the categories and the forms of space and time are not innate synthetic forms. All are the result of the relationships among independent Reals, which are the spring of all activity and existence. Herbart thus gave to the things-in-themselves all the independent functions that Kant attributed to consciousness.

The Many Reals and Nature Phenomena. We must remove the contradictions of experience, if we would get at a true conception of Reality and the meaning of phenomena. The true way is (1) to posit a plural number of Reals, and (2) to interpret the phenomena as derived from the relation among these Reals.

In the first place, a multiplicity of Reals, and not a single Real, is needed to explain the multiplicity of phenomena. Herbart's doctrine is therefore a pluralism. He conceives the many Reals to exist, not in phenomenal, but in "intellectual space." They are not subject to any phenomenal limitations whatsoever; they may occupy one point of space at the same time. Their nature cannot be known, but we can say that they have "absolute position." They cannot be limited nor negated, and even their plurality does not mean that they limit one another.

In the second place, Herbart assumes a multiplicity of relations. Why do the Reals appear as phenomena? Why should the Reals appear to be the qualities that inhere in things, the continuities of things, and the changes of things? Herbart is not altogether satisfactory in his explanation of this problem. It is the problem of the unity of the manifold, which Kant could explain as due to the synthetic power of consciousness; but such an explanation was precluded from Herbart's Realism. Herbart speaks of two kinds of relations. There are the actual relations among the Reals. Although the Reals are conceived by Herbart as simple and unchangeable, he also thinks of them as "coming and going in intelligible space." We can never know what the nature of these actual relations is. The actual relations between two Reals are

not essential to either Real, nor can such relations have their basis in the Reals. All that we can know are the *seeming* relations among things. These are the relations of phenomenal space — of inherence, continuity, and change. Herbart calls these phenomenal relations "contingent views" (*zufallige Ansichten*), and looks upon them as having a semi-existence. That is to say, Herbart regards the world of experience as a world of relations which are not the actual relations among Realities, but merely the phenomenal relations, or relations as they appear to us.

The Soul and Mental Phenomena. Each Real has one single function, viz., self-preservation; and inasmuch as the Reals "co-exist," they mutually disturb each other. The disturbances take the form of inner reactions on the part of the Real in its effort at self-preservation. Prominent among the Reals is the Soul-real. Like all the other Reals, it is unknowable. We have, however, immediate knowledge of its manifestations in its self-preservation among the other Reals. Psychology is the science of the relations which the Soul-real bears to other Reals. From the conflict of the Soul with other Reals, mental phenomena take their rise. Consciousness is, therefore, not the same as the Soul; it is the sum-total of the acts of the Soul in self-preservation. Consciousness is the aggregate mental states, and is not essential to the Soul. Nevertheless, isolated souls do not think; they have no states of consciousness. Consciousness can arise only in a community of Reals.

Our knowledge consists therefore of ideas, which are the results of the disturbance of the Soul-real by other Reals. These ideas live within the Soul, which is merely an indifference point where they are held together. The

ideas in turn disturb and inhibit one another, and the description of our mental life is a description of the reciprocal tension of ideas. The tension among the ideas modifies the intensity of each, and consciousness of an idea is proportional to its intensity. An idea is just on the threshold of consciousness when it has the lowest degree of intensity, and is still actual. When it drops below that threshold it is changed into an impulse. The primary ideas are sensations. They are not the images of things, but the primary acts of the Soul in its attempt at self-preservation. All other mental states, like memory, imagination, feeling, and will, are to be described as kinds of tension of the ideas. Feeling and will are kinds of inhibitive tension. The coming of sensations and the interplay of sensations can be reduced to a mechanical law. Therefore, according to Herbart, psychology is the "statics and mechanics of ideas," and must be treated mathematically.

Herbart's contribution to modern thought lies in his psychology. Modern thought has not accepted his metaphysics, but it has been influenced to a not inconsiderable degree by his psychology. Herbart gave the deathblow to the old "faculty psychology," and he placed psychology upon the same basis as the natural sciences. The science of psychology was not to Herbart a discussion of the nature of the soul, for that is unknowable. It is the study of the aggregate of the contents of consciousness. It is not a study of psychical faculties, but of psychical elements. This reduces psychology to an atomism, like other sciences, and thereby frees it from the influence of theology. Thus was the so-called modern psychology made possible by Herbart. Herbart's theory was also of incalculable value to modern

educational theory. The conception of the influence of environment upon mental life, the theory of the development of mental life, the natural method of "preparation, presentation, association, systematization, and application" of an educational subject, the theory of the correlation of subjects — all are founded upon his psychology. Herbart's attempt to apply mathematics to the laws of psychological phenomena was not so fortunate. At one time, during the nineteenth century, psychologists hoped much from mathematics in their science; but the hope has been practically abandoned. In recent years the demand for exactness has been met in psycho-physics, which operates with mathematics in a different way.

Arthur Schopenhauer * and his Philosophical Relations. Schopenhauer is grouped with Herbart because (1) both had an especial dislike for the idealistic development that the Kantian movement took; and (2) both built their theories upon interpretations of the Kantian thing-in-itself. While Herbart was a Realist, Schopenhauer was a Mystic; which only shows how theories, seemingly very different, can have the same source. Herbart's Realism was an interpretation of Kant's thing-in-itself as many realities; while Schopenhauer's Mysticism was an interpretation of it as one reality. In both theories the consciousness, and with it the reason, were conceived as derivations of the thing-in-itself.

The best approach to Schopenhauer's doctrine can perhaps be made by contrasting it with his pet aversion — the doctrine of Hegel. Schopenhauer was to Idealism what Mephistopheles was to Faust — he turned

* Read Eucken, *Problem of Human Life*, pp. 510–518; Rand, *Modern Classical Philosophers*, pp. 629–671.

Romanticism into pessimism. The theory of empirical evolution, which was to be highly developed in the nineteenth century, lay in theoretical germ in the teaching of the immediate followers of Kant. To Hegel the historical development of the cosmos is the struggle of reason, which with all its essential contradictions is futilely striving to come to itself. To Schopenhauer the history of the cosmos is also an endless struggle, although a struggle in which all reason is absent. Hegel could conceive the history of the cosmos as a development worthy of investigation. Schopenhauer, on the contrary, took no interest in history, because to him it could not be a development. To Hegel, phenomena form an intimate part of the cosmic struggle, since they are the content of the cosmic-reason; to Schopenhauer, phenomena are the surface illusions of an ebullient, unreasoning Will.

As the first theoretical pessimist of Europe, Schopenhauer expressed for the nineteenth century one of its most essential characteristics. He got scant recognition during his lifetime on account of the vogue of Hegel; but to-day it is Schopenhauer, rather than Hegel, who has a popular influence, and is widely read. This is partly on account of his masterly literary style and partly by reason of the content of his doctrine. The nineteenth century was carried along upon a strong current of pessimism because of (1) industrial problems, which involved many ethical considerations, and because of (2) its breaking away from traditional religious ties. So long as the unbounded optimism of Idealism prevailed, the world had little room for Schopenhauer's teaching; but when Realism with its limitations took hold of the nineteenth century, then did Schopenhauer's

day of recognition come. The popular mind has found in Schopenhauer its best philosophical expression, and representatives of his teaching have been numerous. Among them are Richard Wagner (1813–1883) with his music dramas; Von Hartmann (b. 1842) with his theory of the unconscious; Nietzsche (1844–1900) with his extreme statement of pessimism — that in view of universal evil, the only hope is in the survival of the strongest and in the virtue of selfishness.

The Life and Writings of Schopenhauer (1788–1860). Schopenhauer was the kind of genius who is always an alien to the world of men. He lived a long, lonely, isolated life, in which his inherited emotional and brooding nature became more and more cynical and pessimistic. Even in his paternal home he found himself a stranger. His father pushed him into mercantile business, which he hated; and after the death of his father his brilliant mother told him that he was welcome to her Weimar home only as a visitor. The doors of all academic circles were closed to him; and he, in commenting on it, said that he had failed to get an academic hearing, because the German did not believe in a metaphysics which was so expressed as to be understood. But the cause of his isolation lay mainly in himself. He was neurasthenic and peculiar — the subject of ill-temper, night-terrors, causeless depressions and dreads. With the genealogy of Schopenhauer's family on his father's side before us, who could wonder? — the grandmother insane, one uncle insane, one uncle idiotic, one neurotic, and his father a suicide. Schopenhauer's own peculiarities were not pathological. He had a genius that blossomed as early in his years as Hegel's blossomed late. He wrote his two important works before he was thirty.

1. *Period of Education* (1788–1813). The parents of Schopenhauer were wealthy, and in 1803 he traveled with them in England, France, and Holland. In 1804 he entered business, which he gave up the next year on the death of his father. In 1809 he was busy studying the classics, philosophy, and Hindu learning in Weimar, Göttingen, and Berlin.

2. *Period of Literary Production* (1813–1831). In 1813 he wrote the *Four-fold Root of the Principle of Sufficient Reason*, in the Thuringian forest, when other German young men were rallying to arms against Napoleon. This was accepted as a doctorate thesis at Jena. From 1814 to 1819 he lived in Dresden at work on *The World as Will and Idea*, which is the complete exposition of his doctrine. The work is divided into four parts: 1. Theory of Knowledge; 2. Description of the Forms of the Will; 3. Art as a Deliverance from the Will; 4. Morality as a Deliverance from the Will. In 1820 he got a position as Privat-docent in the University of Berlin. This was the only year of his teaching and was an utter failure.

3. *Period of Retirement* (1831–1860). In 1831 he went to Frankfort-on-the-Main to live alone and in retirement. Slowly he became known and gathered a little circle of disciples about him. He died in 1860.

The Influences upon Schopenhauer's Thought. The principal influences upon Schopenhauer's thought were three: (1) Kant, from whom he got his transcendental theory of knowledge (he always considered himself to be Kant's true heir); (2) Plato, from whom he got his formulation of eternal Ideas as offering an escape from the Will; (3) the Hindus, from whom he got his ethical-Mysticism and the confirmation of his pessimism.

Schopenhauer is unique among the philosophers of Europe, because he denied all for which the Enlightenment stood. Even such reactionaries against the Enlightenment as Rousseau were a part of its essential spirit; for the presupposition of traditional theology and philosophy has been that existence is essentially a harmony. Schopenhauer, however, appealed to the discordances and the sorrow of existence, and drew the inference that fundamentally existence is irrational. For the source of Schopenhauer's unique teaching we have to look, therefore, farther than modern Europe. The preceding modern European philosophers whom we have studied, developed their philosophies from purely Occidental sources. Schopenhauer drew from the Orient as well as from the Occident. The Romanticists had re-discovered Orientalism. The study of the Hindus had been interesting European scholars since the beginning of the nineteenth century. Schopenhauer, who was introduced to Indian philosophy by Goethe's friend, Fr. Mayer, read the Upanishads in a Latin translation; and they contributed much to the development of the theory which his own emotional and cynical nature had presaged. The Hindus had long felt that the main problem of existence is moral and physical evil. Schopenhauer found in this teaching the statement of his own attitude.

He esteemed the principles of Christianity and Buddhism because their central requirement was faith in a redeemer rather than a creator. Christianity had no original metaphysics, but Buddhism on account of its metaphysics had an especial importance in Schopenhauer's eyes. It was not only a pessimism, but a philosophy of pessimism. Our existence is only a blind struggle for enlightenment and arises out of a flowing

chain of perennial re-births. Man needs to be freed from the illusion of existence and released from re-birth.

The World as Will and the World as Idea. In *The Four-fold Root of the Principle of Sufficient Reason*, Schopenhauer summarizes knowledge as, "The world is my presentation," which is Kant's theory of knowledge. A conscious subject vitalizes all things. But the presentations have no corresponding reality in the outer world. They are created by my own subjectivity from the "principle of sufficient reason." This has a fourfold root: logic, cause, mathematics, and will-activity. "The world of phenomena is my idea," and in *The World as Will and Idea* Schopenhauer says, "This is a truth which holds good for everything that lives and knows." Man alone can reflect upon this truth. When man comes to the realizing sense that the world is an ideal construction, he begins to philosophize as to the nature of the reality behind it. We remember that Herbart started from the same proposition. However, Schopenhauer departs from Kant's teaching in one important respect: although he agrees with Kant that the thing-in-itself cannot be understood by ideas or a chain of reasoning, he holds that the thing-in-itself is knowable. The World as Idea is a world of appearances, but we can know the thing-in-itself by intuition — by "the look of genius." The certainty of this first-hand or immediate knowledge shows how poor our second-hand or mediate knowledge is. For even reasoned or mediate knowledge in its most perfect form, viz., science, is under the law of cause and can therefore reveal nothing absolute. Science never gets below phenomena.

If reason reveals only the World as Idea, what revelation does intuition give of the thing-in-itself?

Intuition reveals the thing-in-itself to be Will. Man finds, first, the Will to be in himself. He finds it objectified in his own body and in its members. All the members of the body are structures of some function. Every part is the visible expression of some desire. Hunger, speech, locomotion, have their different instruments. Will is immediately known to us as the reality in us. In spite of the exaltation of the reason by the modern Enlightenment, is it not secondary to Will?

For behold! Let me look beyond myself. The revelation of the reality within myself illuminates the reality of the outer world. My Will meets resistance in other things. The everlasting striving of the Will appears in all nature. It appears in the fall of a stone, the crystallizing of the diamond — in all the mechanical movements of matter. "The impulse with which waters hurry to the ocean," the persistence of the magnet for the pole, the perennial push of vegetation, the motivation of animals, show by an analogy stronger than any proof that the reality of the world is fundamentally Will. All nature is in reality the "World as Will." This Will is always one and the same. Only in the "World as Idea" do differences appear. Will is common to all and is the only reality. Differences are illusions, and the reason which exists only in man is one of those differences.

The World as Will and the World as Idea do not stand in the relation of cause and effect, but the World as Idea is the objectification of the World as Will. Will is to phenomena what essence is to expression. Will is the freedom that is within all things; and yet all things are determined when they have the form of ideas. There is only one Will, and so the world is in reality

a unity. In essence all things are the same — in appearance they are different. The Will has no content; it wills to will — to live — to be actual. In the pantheism of the Will the World as Idea is an illusion.

The Will as Irrational Reality. Before Schopenhauer's time European mysticism had been of one general type. However universal the character of illusory appearances had been to the European mystics, there had always been supposed behind the veil a rational reality. Indeed, the illusions themselves had been proof of the existence elsewhere of a governing reason. The mediæval churchman often preached a mysticism, and his exhortation to turn away from illusions of "the world, the flesh, and the Devil," was based upon the compensation to be found in Heaven and in God. The ineffable rest in the bosom of God was reason enough for averting the eyes from the passing show of sensuous things. Schopenhauer now presents to the Occident another type of mysticism, and in this there is no refuge from illusions. This conception had long been common enough in the Orient. The *Rubáiyát* of Omar Khayyám, written about 1100, represents fundamentally the attitude of the Persians of his time. "He is said to have been especially hated by the Sufis, whose practice he ridiculed, but whose faith amounts to little more than his own when stripped of the mysticism and formal recognition of Islamism." (FitzGerald.) But in Europe Schopenhauer's doctrine was unique, and he arrived at its construction by stripping mysticism of all its religious elements. Faith and belief are eliminated because they have no reality as their object. Reason produces only a world of illusory ideas; the Will is a reality, but it is a reality which is only a blind urgency — an

instinctive blind force. The essence of things is undirected striving. Life is the expression of the absolute unreason of the Will. It is a Will without an object. Nature is the objectification of the Will that perpetually creates itself and is forever unsatisfied, unresting, and unhappy.

> "A Moment's Halt — a momentary taste
> Of Being from the Well amid the Waste —
> And Lo! the phantom Caravan has reacht
> The Nothing it set out from — Oh, make haste!" *

The Misery of the World as Idea — Pessimism. The fundamental irrationality of the Will reveals the absolute misery of the World as Idea. The despair of pessimism follows from the very nature of the Will; for it must be remembered that Schopenhauer's pessimism does not merely mean that the appearances of life are illusory, but that reality itself is irrational. The World as Idea is the objectification of such misery. Willing has its source in want, and want arises from suffering. Moreover the proportion of our wants that are satisfied is very small. To one that is supplied there are many that are not. Furthermore, while our desires last long, their satisfaction is short and scanty, "like the alms thrown to a beggar that keeps him alive to-day that his misery may be prolonged to-morrow." Our ever-springing wants make lasting peace impossible. The finite world is not adequate to the infinite craving which it contains, and there is no equation between the cares and the satisfactions of life. The greatest evil that can be-

* Read *Rubáiyát* of Omar Khayyám, FitzGerald's translation, 4th ed., quatrains xlvii–lxxiii; Goethe, *Sorrows of Werther*, as an example of pessimism due mainly to environment.

fall a creature is to have been born; and this is a thousand-fold worse in man than in any other. To live is to go from willing to attaining and then to willing again. Attainment means new striving, and the Will shows "the ache of the not-yet-satisfied." After all is said and done, satisfaction destroys not only the desire, but the satisfaction itself. There is no meaning in life. Pain is positive; pleasure is negative, and is merely the absence of or respite from pain.

The Way of Deliverance. The relief from misery that Schopenhauer offers is tinged with the grim despair of life itself. It is an escape that he finds, rather than a haven — an escape that consists in giving up all that life means. Why not, then, give up life, since it is misery and torment? But escape is not in suicide, for the act of taking one's own life is the performance of the greatest act of affirmation of the Will; and in the Buddhistic doctrine the suicidal soul only passes by re-birth (metempsychosis) into another form of Will. Schopenhauer uses two phrases that have become classic in the description of the two attitudes possible to man: (1) if man is merely a part of the World as Idea he is "affirming the Will to life"; and (2) if he seeks a way of deliverance he "is denying the Will to life." Suicide is an act of affirmation of the Will to life.

How may the Will be denied? and since we are in essence Will, the question takes this form, How may the Will deny the Will? This question presupposes a transcendental freedom which may be sought in two ways: one in which the freedom is temporary and the other in which it is permanent.

1. The temporary deliverance of the Will may be found in artistic contemplation (Schiller's disinterested

contemplation). Art deals not with particular forms, but eternal types (Platonic Ideas). Art isolates an eternal object from out the stream of the world's changes, and places it beyond all relations of time, place, and cause. Art not only removes its object from the World as Idea, but it removes the contemplator as well. The contemplating subject and the contemplated object thus become one, and the subject is temporarily saved, for he is elevated above all desire and pain. This, however, is possible not to the majority of men, but only to those few possessing æsthetic fancy, and for them only at intervals. Music is ranked by Schopenhauer as the highest form of art, — even above poetry, — and it is not surprising therefore that among the Schopenhauerian worshipers have been many prominent musicians.

2. But artistic ecstasy is too fleeting and restricted to offer lasting deliverance from the affirmation of the Will to life and the World as Idea. Another act of transcendental freedom will bring man into more complete freedom; but *this act is a miracle and a mystery*, since it is the complete transformation of our nature. This act must be supernatural, and the church is right in calling it a new birth and a work of grace. *Complete freedom from the Will comes through moral deliverance.*

This lasting escape from the Will is open to the man who appreciates two facts: that all striving for happiness is vain; and that all men are alike manifestations of the Will. To take this double view of life involves the feeling of sympathy with others in their misery. Sympathy is thus the only true moral motive and the fundamental ethical feeling. The Will in us is

moral if we feel another's hurt as our own. But sympathy is only a palliative, and it does not remove the cause of disease. The misery still exists, and our sympathy has only changed its form. Even though our sympathy goes out to the whole world, the endless tragedy would still pass on.

In the moral deliverance sympathy can be made complete by absolute denial, and this will come by asceticism, mortification, and complete eradication of want and desire. The Hindu *sannyasi* shows the way. This is the mystery of the Will. But Schopenhauer is not quite sure that extreme asceticism can be made effective, since we are full of Will. At the close of his work he says that even if we could be completely ascetic the result would be Nothingness. "In thy Nothing I hope to find the ALL." Schopenhauer despairs of deliverance for himself, but does not count it unachievable by others. Absolute deliverance even by asceticism seems impossible to him. The only hope is that through art and science the Will may be some time overcome.

CHAPTER XIII

THE PHILOSOPHY OF THE NINETEENTH CENTURY *

The Return to Realism. If the history of mankind had terminated with the nineteenth century, the last tendency of thought to be recorded would have been the return to Realism. The abbreviated account which follows of the philosophy of the nineteenth century will explain and illustrate this tendency. Before we set this forth, however, it may be well to define again the nature of Realism. What is Realism? In general it is the belief that reality or realities exist quite independent of anybody's knowing them. Moreover, Realism has the distinction of being one of the four great types of metaphysical thought. These types are Realism, Mysticism, Critical-rationalism, and Idealism.[1] In other words, Realism is an attitude of mind possible to a whole civilization. This is what is meant by a great philosophical type. The Idealism of the period which we have just studied is such a type. Although Germany had been the leading representative of Idealism, the spread of philosophical and literary Idealism had been world-wide. All nations had shared in it. But when the great events and the romancing spirit of that period

* Read Rand, *Modern Classical Philosophers*, pp. 703–708; Weber, *Hist. of Phil.*, §§ 69, 70; Eucken, *Problem of Human Life*, pp. 518–523, 524–553, 559–573; Nietzsche, *Also Sprach Zarathustra;* James, *Pragmatism*, Lectures I, IV, VII; Royce, *Spirit of Mod. Phil.*, Lecture IX.

[1] Royce, *The World and the Individual*, vol. i, pp. 60 f.

had passed, the reaction to Realism was likewise felt the world over. It is the period of this reaction that we are briefly to consider.

The Character of the Realism of the Nineteenth Century. We have already discussed the nature of the Realism of ancient civilization as it appeared in Plato's theory of Ideas; and we also have reviewed the variation of Plato's doctrine in mediæval times. Both ancient and mediæval societies give expression through Plato to Realistic conceptions — ancient society to an æsthetic Realism, mediæval to an ecclesiastical Realism. Now in the modern period we find a still different kind. *The Realism of the nineteenth century has been that of natural science.* The question of the nineteenth century has been, What degree of importance has the scientific conception of phenomena in our total conception of life? German Idealism had taken up the natural science of the Renaissance and the Enlightenment, and had made it a part of a world conceived as cosmic Reason. But in the nineteenth century the conception of the cosmic Reason and that of nature part company. The two conceptions begin to stand in antithesis. Nature is conceived as a reality existing in sublime independence. Democritus wins his victory over Spinoza. There are two reasons for this: (1) The ideas of science are expressed with a clearness and distinctness that is in marked contrast with the ideas of German romanticism. Natural science is formulated mathematically and demonstrated in experience, and natural science moreover does not require the labor of interpretation. (2) Natural science proves its usefulness, thereby responding to the imperative needs of the economic changes of the nineteenth century.

In this modern period the attention of man has been riveted upon his environment. If at any time the man of the nineteenth century has seemed to be interested in man, the interest has really been in man's relation to his environment. The nineteenth century has championed the necessary laws and mechanical structure of the outer world against man himself. The universe has been enthroned; man has become its serf. Human effort has become slave to its own progress. Work has been apotheosized — work in the outer world, work with the hands. Inventions in material things have multiplied. The nineteenth century has been the period of steam, of electricity, of machinery, of factories, of the enormous increase in the number and size of cities, of the minute division of labor. Social and economic rather than metaphysical problems have commanded attention. Not another and ideal world, but *this present world*, is the one in which the modern man has lived. The sciences have been specialized and man has become practical. Hegel would have said of our time that the cosmic Reason had been so engaged in concrete and external realities, that it had had no time to turn within and scrutinize itself. If one wishes to turn back the leaves of history for centuries similar to the nineteenth in their spirit, one will find them in the third and second centuries B. C. and the fourteenth and fifteenth of the present era. Nevertheless, there is this to be said about modern Realism in comparison with the Realism of preceding periods — the preceding Realism had been critical, negative in its practical results, and usually an opposition to tradition or a reaction from it; modern Realism has been distinguished by its positive practical results, its ambition for supremacy, and its shaping of the whole

direction of the life of man. It has assumed control of religion, art, and social morality, to the end of the well-being of the whole.

Modern Philosophy and German Idealism. The nineteenth century has been remarkable in the extent of its historical, literary, and scientific productions. It has been poor in its philosophical ideas, when we compare it with the preceding romantic movement of the German Idealists. To be sure, there has been much philosophical literature with a great variety of doctrine, but the many personally impressive structures have on the whole been only the re-shaping of former thought. It has sometimes seemed as if some of the philosophic doctrines of this time were about to take original shape; but none have ever reached it, with the possible exception of the doctrine of historical evolution.

The explanation of the uncreative character of modern thought is found in its relation to the Idealism which preceded it. The German Idealists had conquered the world of the spirit, but in spite of all their efforts the realm of empirical facts remained stubborn to all their romancing. Even Hegel, the greatest among them, had not succeeded in completely penetrating history by his dialectic law. Already in the eighteenth century a Realistic movement had been stirring in England and France, and had made notable achievements. So the Idealists turned to the study of the facts of life — partly in order to subordinate them to their Idealism, partly because a great interest had appeared in the study of the records of the past. The origin and history of religions, of law, of languages, of art, of institutions formed topics of study within the Romantic circle. A remarkable list of books was published by the Romanticists on these subjects

between the date of the battle of Waterloo (1815) and that of the death of Hegel (1831). After Hegel died no adequate successors in speculative power came to take the place of the old Idealistic leaders, but the interest in empirical science was borne on by many men of genius. The study of empirical phenomena was extended to all branches; biology and geology, which were late in being studied historically, began to occupy the centre of the stage. In spite of the fact that the nearness of modern philosophical theories blinds us to their true perspective, yet even now we can see that in comparison with the German Idealism the philosophical doctrines of the nineteenth century are partial in their survey of the field. The whole problem of life was before the eyes of the Idealists; the modern world about 1831 shifted its attention to a critical scrutiny of only one part of that problem. The philosophical problem to the Idealists was the problem of the cosmos; the philosophical problem to the nineteenth century was concerned only with a reëxamination of the environment of man.

The Philosophical Problems of the Nineteenth Century. In summarizing what we have above said, we have before us a situation something as follows. Idealism had run its course as a social attitude of mind, and about 1831 the leaders of Idealism had died with no one to fill their places. But within Idealism between 1815 and 1831 there had arisen a great empirical interest in the origins of history, law, philology, etc. Side by side with this empirical interest there had come certain economic conditions that had called forth and rewarded genius in natural science.

Thus we find even before the fourth decade of the

nineteenth century two strong tendencies: (1) a new conception of the meaning of history as an evolution from origins; and (2) a remarkable interest in the natural sciences. The two tendencies modified each other. The historical view of the world exercised a powerful influence upon natural science; natural science had to be reckoned with in the writing of history. History and natural science were drawn together, but without producing a new philosophical conception that would include them both.

From the interaction of these two powerful tendencies the great variety of philosophical interests were grouped around two general problems. These were (1) *The problem of the functioning of the soul;* (2) *The problem of the conception of history.*

1. **The Problem of the Functioning of the Soul.** With the decline of metaphysics and the reaction from speculation, psychology began to loosen from its anchorage in philosophy. Psychology, which had been a study of mind, now became the study of the relation of mind and body. The tendency was strong to make psychology an empirical science, and by the use of the methods of science to become a part of physiology and biology. Philosophy has been a nest in which all the sciences have been brooded. Psychology has been the last to attempt to leave the nest, and to-day in some of our large universities it is coördinated in the curriculum with the natural sciences. Deprived of a basis in philosophy, psychology turned to natural science for support. Concerning the relation of the soul to the body many solutions have been offered.

Following the Sensationalist, Cabanis, who died in 1808, some of the French Ideologists, so-called, con-

cluded that the soul is everywhere determined by physical influences, such as age, sex, temperament, climate, etc.; some said that the mind is a result of brain activity; some developed the conception of phrenology, according to which the shape of the skull determines the faculties of the mind. The French Ideologists differed widely in their interpretations, but on the whole the basis of the movement was materialism. The hypothesis of phrenology aroused great interest in England, but John Stuart Mill led the movement back to Hume's associational psychology. He conceived the psychical and the physical states as two separate realms, and he concluded that psychology as the study of the laws of mental states cannot reduce mental states to physical. So Sir William Hamilton, under the influence of Kant, championed the life of inner experience.

Of course the materialistic challenge of the soul aroused great heat in theological circles. The personality of God and the nature of the soul became burning questions, and led to the dissolution of the Hegelian school into "the right wing" and "the left wing." Hegel had always maintained his standing in orthodox circles as the Prussian "State philosopher." Those followers who composed the "right wing" tried to interpret his doctrine in accordance with the traditional theological conception of the soul; the "left wing" interpreted Hegel as a pantheist, in whose doctrine the soul could not be considered as a substance with immortality. Feuerbach followed this by inverting Hegelianism into a nominalistic materialism, and conceived the soul as nature "in its otherness." In 1854, at a convention of naturalists in Germany, the materialistic conception of the soul was found to be widely spread among the

German physicians and naturalists. But the contradiction between the inferences of science and "the needs of the heart" became a subject of controversy, and in 1860, under the leadership of Kuno Fischer, the "return to Kant" was begun, which lasted throughout the nineteenth century.

There are two names that stand out most prominently in relation to this controversy over the nature of the soul: they are those of Lotze (1817–1881) and Fechner (1801–1887). They are names that were conjured with by the generation of American scholars before the present. Lotze regarded the mechanical necessity of nature as the form in which the impulsive mental life of man realizes its purposes. Every soul therefore has a life that consists essentially in purposeful relations with other souls. And this is possible only if the lives of men are under an all-embracing Providence. Fechner chose another way to escape from the materialistic tendency. He regarded the soul and body as separate and qualitatively different, although exactly corresponding, manifestations of one unknown reality. There is a parallelism between the mental and the physical, in which the mental phenomena are known only to the individual perceiving them. As sensations are the surface waves of a total individual consciousness, so the consciousnesses of human beings are the surface waves of a universal consciousness. The mechanical activity of nature corresponds to the consciousness of God. We can investigate this correspondence by studying the correspondence between our own mental states and physical states. This is the modern well-known psychological method of psycho-physics. We can measure psychical quantities by formulating mathematical laws of their occurrence.

Our present psychology has seen a development from all these earlier explanations; but this is a matter of contemporary writing and not of history.

2. **The Problem of the Conception of History.** The contrast in the Kantian teaching between nature and mind became an antagonism in the nineteenth century. When psychology was no longer a purely mental science, social life in its historical development at first withstood the vigorous march of the natural science of the nineteenth century. But the inroads of science in psychology were duplicated in the field of sociology, and thus the problem of society was only the problem of the soul on a larger scale.

The first form that this problem took arose from the opposition in France between the traditional conception of society and that of the philosophy of the Revolution. The nineteenth century French philosophy has, however, a religious coloring that differentiates it from that of the Revolution. Auguste Comte * (1798–1857) stands as the chief representative of this scientific reduction of society. He pushed the doctrines of Hume and Condillac to their extreme in his positivist system of social science. He maintained that human knowledge had as its objects phenomena in their reciprocal relations, but that there is nothing absolute at the basis of these phenomena. The only absolute principle is, All is relative. There is a hierarchy of sciences in which sociology is highest. Sociology includes all the preceding sciences, and yet it is the original fact. The first social phenomenon is the family. The stages of the development of society are (1) theological, (2) metaphysical,

* Read Rand, *Modern Classical Philosophers*, pp. 672–689.

and (3) positivistic or scientific. All mental life in detail, and human history as a whole, are subject to these stages of growth. In the positivistic stage mankind will be the object of religious veneration, and the lives of great men will be justified because they have raised the lives of common men. The democracy to which Comte looks is one ruled by great minds, and is not a socialism. In contrast to Comte's theory is that of Buckle, who would study history by discovering the mechanical laws governing society.

While human history was thus being invaded by natural science and had to defend its autonomy against the naturalistic principle of science, natural science on the other hand was in the nineteenth century invaded by the historical principle of evolution. Natural science becomes a history. We have seen that in the Romantic circle there was great interest in the origin and development of law, philology, art, etc. In the beginning and middle of the nineteenth century this interest spread to an investigation of the origin of animal life. This investigation has been the most notable in this century, because (1) it included in its scope the source and means of progress of the human race; and because (2) it advanced a new conception of development. Development now becomes evolution. Up to the nineteenth century the world was looked upon as a graded series of types, but no type was supposed to evolve into another. (See vol. i, pp. 180, 193; vol. ii, p. 306.) The theory of historical evolution of the nineteenth century is notable because it advanced the conception, based upon empirical investigation, that types are changed into others. This theory, among those of the century,

comes the nearest to an original philosophical doctrine. The book that became the centre of scientific interest for many years was Darwin's *Origin of Species*, published in 1859. The name most prominently linked with that of Darwin is that of Herbert Spencer, who attempted to make universal the principle of development and to formulate its law.

The modern theory of the historical evolution of animal life has reinforced the mechanical principle of nature, which had its origin in the minds of the philosophers of the Renaissance. It has antagonized the theological doctrine of creation; it has related the animal and man by filling in the supposably impassable gulf between them; it has advanced the doctrine of chemical synthesis against the hylozoistic notion of a vital principle; it has pushed forward with great assurance its theories of transformation and equivalence of forces, and of the action of electricity as a substitute for thought-activity; it has shown a wonderful parsimony in giving a value to all the facts of history which had hitherto been conceived as trivial; and on the other hand it has reduced the conception of mighty cosmic cataclysms to a geological series of gradual gradations. Darwin's place in this movement of the nineteenth century was this: he tried to show that animal life can be explained without the aid of final causes. In other words, the adaptation of the structure of animals can be accounted for mechanically. The factors involved in the development of organic life upon the earth were, according to Darwin, infinite differentiation, adaptation, natural selection, and the survival of the fittest.

Now at the beginning of the twentieth century there seems to be a reaction from the scientific positivism of the last century. This has taken the form of an extravagant mysticism, although at heart it is an optimism and an idealism.

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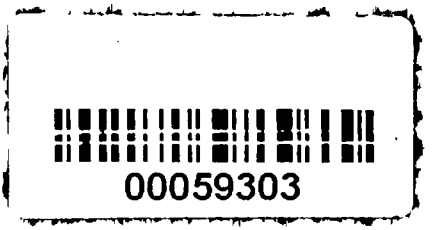

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